



# Eglin Range General Plan

*“A Framework  
for the Future”*







**DEPARTMENT OF THE AIR FORCE**  
HEADQUARTERS AIR FORCE DEVELOPMENT TEST CENTER (AFMC)  
EGLIN AIR FORCE BASE, FLORIDA

Thanks for taking the time to review the Eglin Range General Plan—A Framework for the Future. The tremendous change the military is undergoing demands more than ever that we plan for the future. This Plan shows how the Eglin Range supports the three thrusts of the AFDTC Core Purpose: supporting the warfighter, providing outstanding host services to our associate units, and maintaining the high quality of life within the Eglin community.

AFDTC's primary mission of full-service air armament development requires ready access to open-air test and evaluation resources. The Range General Plan establishes a hierarchy of goals, objectives and actions to ensure Team Eglin continues to effectively test the new systems currently under development and those technologies emerging from the laboratories. The challenges of testing these systems, many with longer range, new control characteristics and greater reliance on equally advanced communications, intelligence and computers, are fully addressed by this Plan.

Our associate community, including units from the Navy, Army, and Air Force, is a vital part of Team Eglin. The Range General Plan enables their continued access to the Range, a critical component to accomplishing their mission, while recognizing the valuable synergy they bring to the Range.

The Range General Plan acknowledges the integral role that Eglin plays in our rapidly growing region. Continued partnership with the communities is a key part of this Plan, as both Eglin and the surrounding communities seek to reach their full potential. It is considered vital that we continue to enhance the many dimensions of our vibrant Military-Civilian partnership.

The Range General Plan provides us with a strategic step in this direction - it is truly "A Framework for the Future."

STEWART E. CRANSTON, Maj Gen, USAF  
Commander



*Maj. Gen. Stewart E. Cranston*  
*Commander, AFDTC*





*More than 130,000 square miles of land and water ranges with restricted airspace*



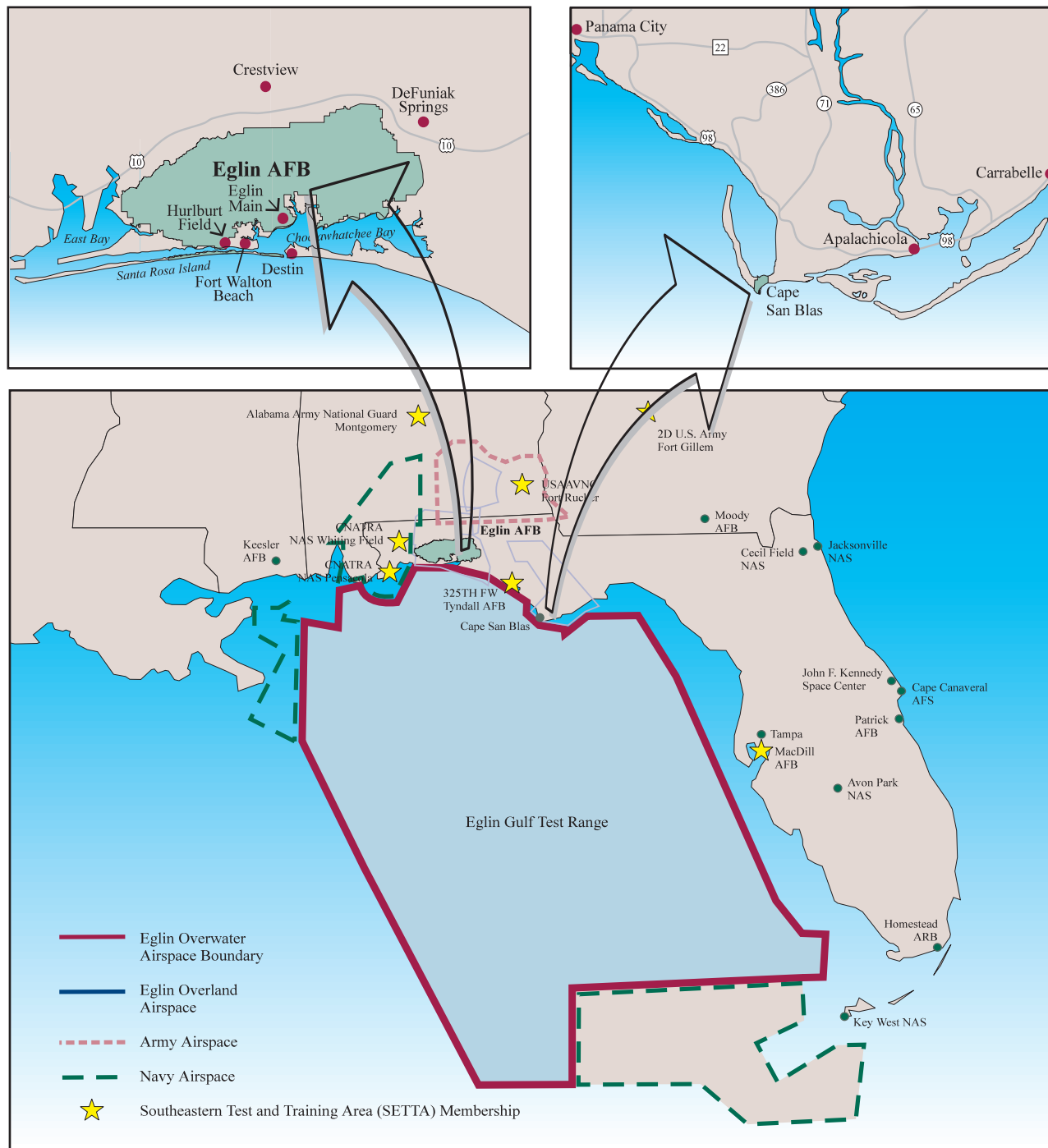
*\$6.9 billion in capital investment*



*Unmatched intellectual resources*

*“The strength of Eglin is in munitions testing. The three pillars that support that strength are our natural resources of land and water ranges, the capital investment in our one-of-a-kind test facilities, and the world-class intellectual capital of our scientists, engineers, and technical support people.”*

—Major General Stewart E. Cranston  
Commander, AFDTC



Eglin AFB Regional Location Map with supporting SETTA airspace and members highlighted.

# CONTENTS

The Challenge .....	2
The Range .....	4
The Mission .....	4
Community Profile .....	6
Eglin Military Complex Profile .....	8
The Range .....	10
Planning Context .....	16
Range Planning Areas .....	20
Range Planning Areas Summary .....	32
The Vision .....	34
Today and Tomorrow .....	34
AFDTC Range Goals .....	36
Range Vista 2025 .....	38
2025 Range Objectives .....	40
The Strategy .....	42
Comprehensive Plan Program .....	44
Planning Elements Status .....	46
Range “Intelligent” Maps .....	48
Structure .....	50
Implementation .....	52

# The Challenge

Eglin Air Force Base stands as the nation's premier center for the development and testing of enhanced conventional weapons—weapons that meet the need for national security by ensuring the U.S. Air Force remains the world's dominant air and space force. Eglin will continue meeting this need through a coordinated and carefully constructed strategy.

**Here is the framework for the Range to meet The Challenge . . .**

## . . . For Defense

While the breakup of the Soviet Union has prompted changes in our national defense strategy, the basic tenet “peace through strength” has not changed. Instability exists throughout the world, and the Air Force is proving its ability to maintain a global presence without a large permanent force overseas. Today's rapidly changing international climate demands this sort of presence, exemplifying the Air Force Vision: *Global Power and Reach for America*.

## . . . For Enhanced Weapons

A new generation of precision-guided weapons is changing the way the Air Force is meeting our nation's air-to-surface munitions needs. Ever-increasing levels of precision strike accuracy can be attained by longer-range, smaller, stealthier and more autonomous weapons from smaller aircraft. Operation Desert Storm under-

scored this direction, as a second generation of “smart weapons”—developed in the 15 years since Vietnam—made the difference in bringing the conflict to an early resolution. Of those weapons, 75 percent were developed and tested at the Eglin Air Force Base Range.

Air superiority is a hallmark of our Air Force. Since 1942, American troops have not had to fight without air superiority. AMRAAM and AIM-9 missiles, developed and tested at Eglin, continued this tradition of U.S. air power in Desert Storm, and they reinforce it daily around the world.

Army missiles vitally complement air-to-surface weapons to control armored aggressor forces in the air-land battlefield as proven in Desert Storm. The Eglin Range is the home of Hellfire development and successor testing with over 1,000 missiles tested. **It is truly the birthplace of enhanced conventional weapons for today and tomorrow.**

## . . . For Range Planning

Just as visionary planning is vital to the development of these new weapons systems, Eglin must ensure that special test facilities and the air, land, and water ranges are available to support these weapons. **This Plan is focused on the Range portion of the Eglin mission—the graduation exercise of weapons development—their “Proof by Trial.”**

Eglin is a truly unique military installation in its vast size and diversity of activities. As such, planning for this expansive resource has presented challenges over the years. This first-ever Range General Plan is comprised of three components:

- **The Range** examines physical attributes, mission activity, and current topics.
- **The Vision** establishes Range goals to support future weapons testing.
- **The Strategy** charts a course to attain the goals while addressing the topics.

Comprehensive planning capitalizes on the Range's unique resources and setting within the region. Such planning, as guided by Air Force Instruction 32-7060 “Air Force Comprehensive Planning,” establishes a framework for integrating competing demands and bringing order in a way that meets the challenges of the future.

**This is the Eglin Range General Plan.** While supporting sustained economic development and diversification in the civilian community, it will ensure short term decisions do not adversely impact the future potential of the Eglin Range, the nation's premier center for munitions research, development, testing, and evaluation. **As the framework of Eglin Range planning, it will:**

- **Provide the Focus**
- **Define the Process**
- **Support the Mission**
- **Ensure the Future**

# The Executive Summary:

## Recommendations for Range Planning

This plan establishes “A Framework for the Future” of the Range based on the following:

- **Continuing to manage the Range Planning Areas** - *Airspace, Land Use, Transportation, Infrastructure, Gulf of Mexico, and Environmental* (pages 20-33).
- **Focusing on the 2025 Range Objectives** by always putting decisions into the big picture context of the Range Goals of *maximizing Range capabilities, maintaining a proactive planning perspective, and enhancing the military-civilian regional partnership* (pages 36-37). At the same time, continually striving to achieve the 13 specific objectives established for 2025 (pages 40-41).
- **Institutionalizing Range Comprehensive Planning** through the Plan’s objectives to *accomplish key specific planning efforts, enhance the Range Geographic Information Systems, and establish an appropriate Range planning structure* based on the Test Wing Commander’s Range Development Executive Steering Committee planning cycle (pages 46-51).

**Note to Planners:** This first Range General Plan is more process and structure oriented than a typical General Plan which would provide actual development concepts. As the Range planning process matures, subsequent Range General Plans will stress development plans and their execution.



AFDTC's rapid development of the GBU-28 made a decisive difference in Desert Storm. Here, a GBU-28 is inspected at Eglin's High Explosive Research & Development (HERD) facility.

*“To gain maximum leverage from all of our warfighting platforms, enhanced weapons programs are essential.”*

—Dr. Sheila E. Widnall  
Secretary of the Air Force



# The Mission

The Eglin Military Complex occupies much of the Northwest Florida panhandle east of Pensacola. With 724 square miles of land area and approximately 130,000 square miles of airspace overlying land and water ranges, it is the largest Air Force base in the free world. Its unique combination of natural resources, capital assets, and talented people provide an outstanding environment for fulfillment of the Eglin Range's mission.



*Obscurant test item explodes over tracked vehicle during a "Smoke Week" event.*

Eglin has armed the U.S. Military for six decades. Today, the Eglin Range is home to a wide variety of U.S. Air Force units. In addition, the Range is also host to Army and Navy operations. The Range has an unsurpassed arrangement of more than 50 specific test areas and sites embedded in a single contiguous land area adjacent to the Gulf of Mexico. This unique setting and overwater airspace combine to

provide a sea-to-land transition area—a vital resource for modern weapons system research, development, testing, and evaluation. These test areas are located beneath special use airspace that permits relatively unconstrained operations and makes the Eglin Range an ideal setting in which to operate.

## ... For National Security

As the Air Force's premier munitions testing center and a unique DOD training location, the Eglin Range is indispensable to America's defense effort. It is an invaluable national asset in terms of both its testing, evaluation, and training mission support to the DOD, and its bountiful cultural and natural resources. No other U.S. military installation offers such an expanse of land and water located in an ideal climate with so much diversity of terrain and vegetative cover.

Mission activities at the Eglin Range today fall into four broad categories:

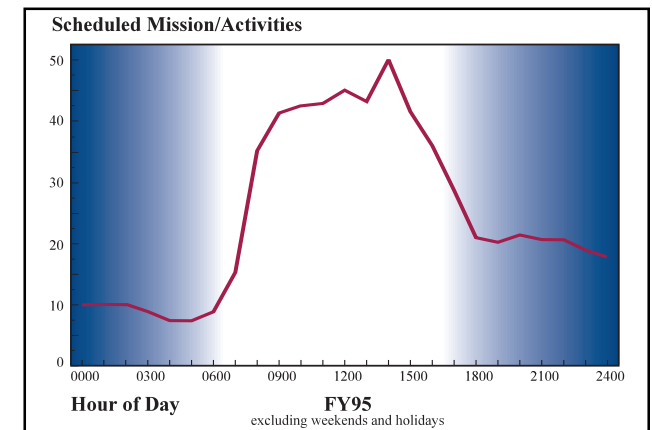
- Weapons system research, development, test, and evaluation
- Training
- Space operations
- Base and range support

Among USAF bases, only the Eglin Range offers terrain features such as jungle, shoreline, rolling hills, dense forest, cleared flat expanses, and water all in one location. These features make

the Eglin Range the perfect location for weapons testing by providing flexibility for supporting a variety of mission requirements.

## ... For Integrated Testing and Training

Testing and training on the Eglin Range are coordinated to capitalize on this unique setting. Through this coordination, the Range is able to support DOD efforts with enhanced weaponry to ensure our nation's defense superiority. In fact, testing and training at the Range is a 24-hour operation, with activities in progress in varying levels of intensity.



*Eglin is active 24 hours a day. This graph shows the number of missions in progress throughout a typical 24-hour period.*

## ... For Lifecycle Support

What makes the Range unique is the depth and breadth of testing that occurs there. All phases



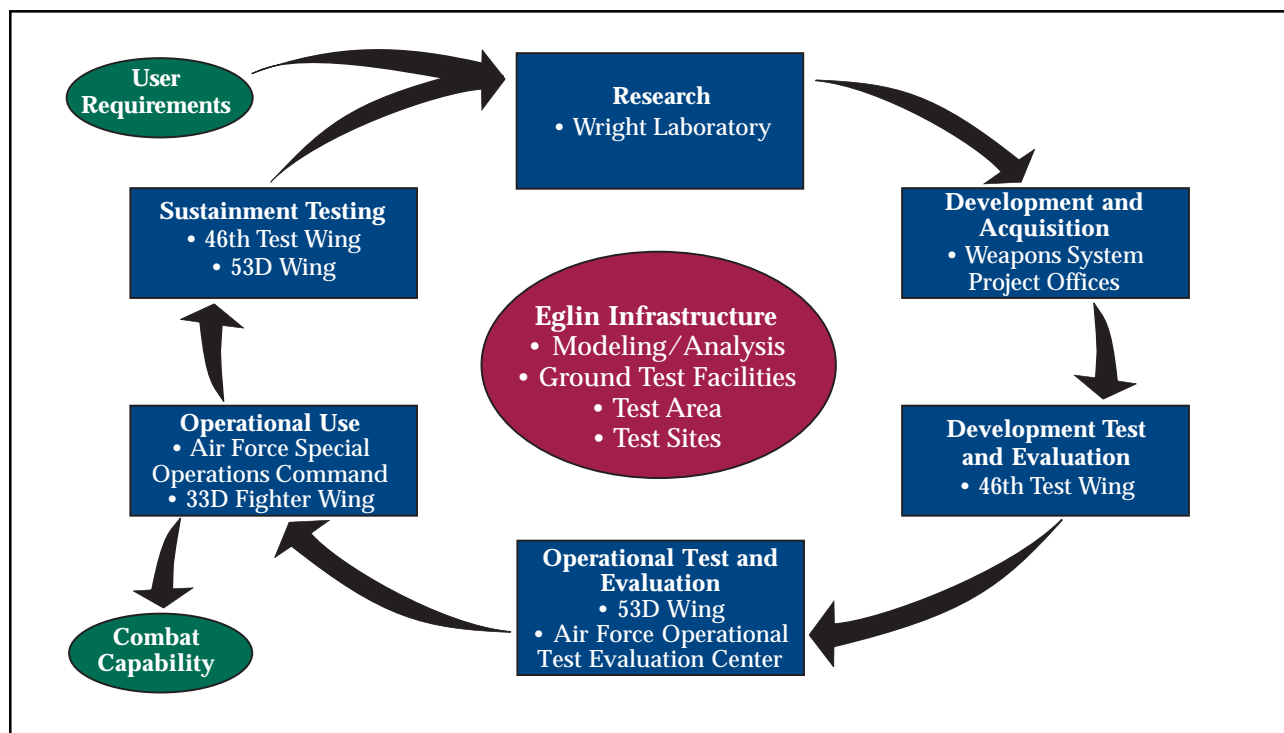
of munitions life cycle support occurs on the Eglin Range from research through sustainment testing. Additionally, various operational units train on the Range. This interplay of units, all focused on ensuring that our nation employs superior enhanced munitions, is unsurpassed and generates a synergism that cannot be quantified. Past performance proves its unquestionable value. The Eglin infrastructure plays a pivotal role in this unique synergism. The Eglin Range has been and will continue to be a critical component in testing munitions systems.

Operation Desert Storm clearly demonstrated the role of Eglin AFB in supporting national policy objectives. Hurlburt Field-based helicopters fired the first missiles of the war—Eglin-

developed Hellfires—to suppress enemy radar defenses. Eglin's 33D Fighter Wing achieved air superiority with Eglin-developed and tested air-to-air missiles to attain the highest number of kills with no U.S. losses. Seventy-five percent of the munitions used during the war were developed or tested at the Eglin Range. These weapons conclusively proved the value of precision-guided munitions.

A special Laser-Guided bomb, the GBU-28, was developed, tested, and delivered in eight weeks to destroy 100-foot-deep Command and Control bunkers.

**Desert Storm showed with unmistakable clarity Eglin's premier munitions role within DOD.**



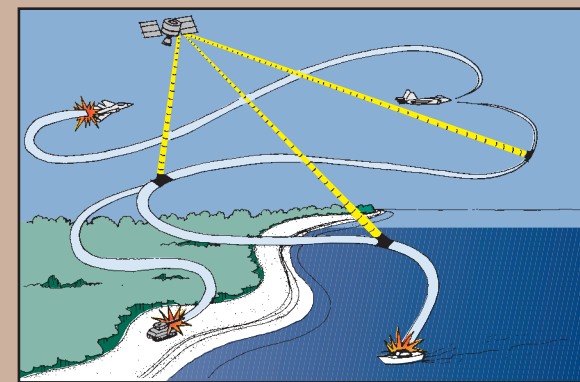
Eglin AFB munitions systems acquisition and development process with Eglin units. Cradle-to-grave weapons testing and training is a reality at Eglin AFB.



PAST: Multiple aircraft - tons of gravity bombs - single target



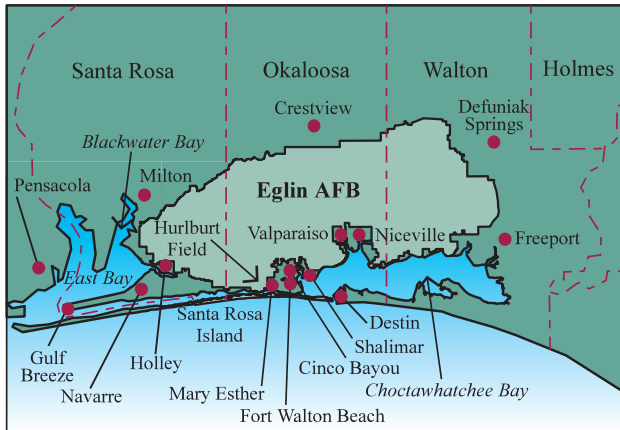
PRESENT: Single aircraft - precision weapons



FUTURE: Multiple targets per aircraft at long standoff

# Community Profile

Since its beginnings more than 60 years ago, the Eglin AFB complex has shared an interdependent relationship with the three counties it spans and the numerous communities that surround it. This relationship has evolved as Eglin AFB and the region have grown, but Eglin's dedication to the partnering principles it follows in relations with the communities has not wavered. This partnership continues to mature as the region grows and the Eglin complex maintains a steady level of activity. The relationship must be maintained to ensure the region's continued high quality of life.



*Eglin and the surrounding communities comprise a major portion of the Northwest Florida region.*

## Growth

Northwest Florida is experiencing a period of unparalleled growth. The “Emerald Coast” boasts over 100 miles of sugar white beaches, clear blue waters, and 343 days of sunshine a

year. It has become a mecca for more than 2.5 million tourists annually and growing. For example, the population of Okaloosa County has doubled in the past 25 years and will nearly double again in the next 25 years. New construction is everywhere, both along the coast in support of tourism and inland as the economy continues to diversify.

## Economy

The economies of the region's communities have long been tied to Eglin AFB. *Nearly 70 percent of the direct and indirect employment in Okaloosa County is driven by Eglin.* The military accounts for 64 percent of the county's payroll and 63 percent of the retail sales. While the importance of service-based employment is



*Old Pass Lagoon, Destin area. 1950s (above), and the same area today.*



growing, the surrounding communities will continue to depend on Eglin. It is forecasted that Eglin will remain at the same level of operation, but its impact on the community is projected to lessen in the next 15 years to 60 percent of the jobs and 40 percent of the retail sales—still very significant.

## Infrastructure

Population growth is taxing the regional infrastructure and will only continue to increase demands. Area leaders agree that the challenge to future infrastructure will be providing the following, listed here in order of priority:

- Highways
- Water and Sewage
- Housing
- Air Transportation
- Recreation

The Eglin Range directly supports the region with 9,300 acres of right-of-way for major highways and utilities—power, water, sewer, gas, and communication. Over 1,000 acres of the

Range are used as spray fields for community-generated sewage effluent. Eglin Main Base supports the Okaloosa County Air Terminal by providing land for a passenger terminal and access to runways. Eglin's land resources are also used for schools and cemeteries. *On a non-interference basis, more than 60 percent of the Range is available to the public for hunting, fishing, camping and swimming.* It is clear that the Eglin Range plays a vital role in meeting key community infrastructure needs.



*Thoroughfares must be able to accommodate increased traffic.*

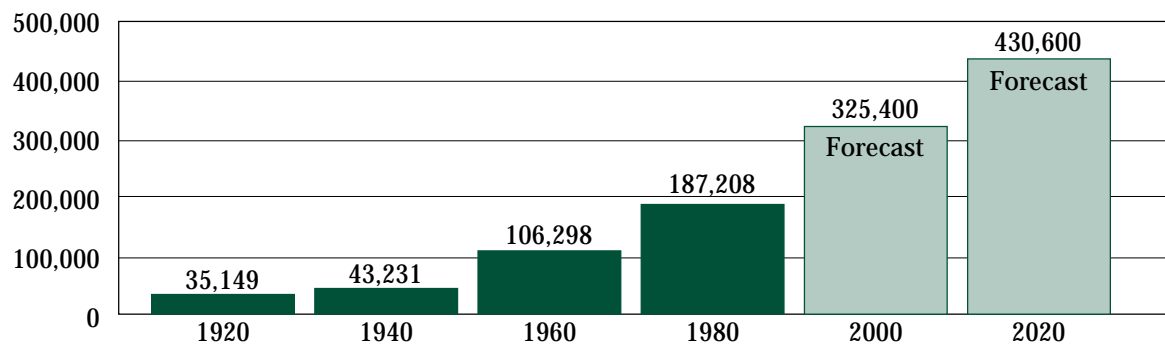
## Partnership

As the community continues to grow, Eglin will work cooperatively to enhance economic development and quality of life without impacting the long-range military viability of Eglin AFB and its missions. The strategy is to identify needs and plan early in cooperation with local planning agencies. Through proactive early involvement, Eglin can better understand and meet the community's needs.



*New home construction keeps pace with population demands.*

**Population - Santa Rosa, Okaloosa, Walton Counties**



Sources: University of Florida; U.S. Bureau of the Census

*Regional population is expected to continue to increase through 2020.*

*“Okaloosa County realizes the economic benefit of Eglin and we are committed to protecting the Range and Resources. Working together, we can continue to make a difference.”*

—Kathie O'Dell  
Okaloosa County Commission

*“We are absolutely committed to working and cooperating with the community.”*

—Robert Arnold, AFDTC/DR  
Director, Requirements



# Eglin Military Complex Profile

The Eglin Military Complex is comprised of a variety of areas:

- The Eglin Range (Land, Airspace, Gulf)
- Eglin Main
- Hurlburt Field
- Duke Field
- Site C-6
- Camp Rudder
- Choctaw Field
- U.S. Coast Guard Station Destin

**The Air Force Development Test Center (AFDTC)** is the host unit at Eglin. As such, AFDTC administers the various physical attributes of the Range (land and water ranges, airspace) and supports the various training activities conducted there. AFDTC plans, directs, and conducts tests and evaluation of conventional munitions and electronic systems. The center accomplishes its test and evaluation mission primarily through the 46th Test Wing, supported by the 96th Air Base Wing.



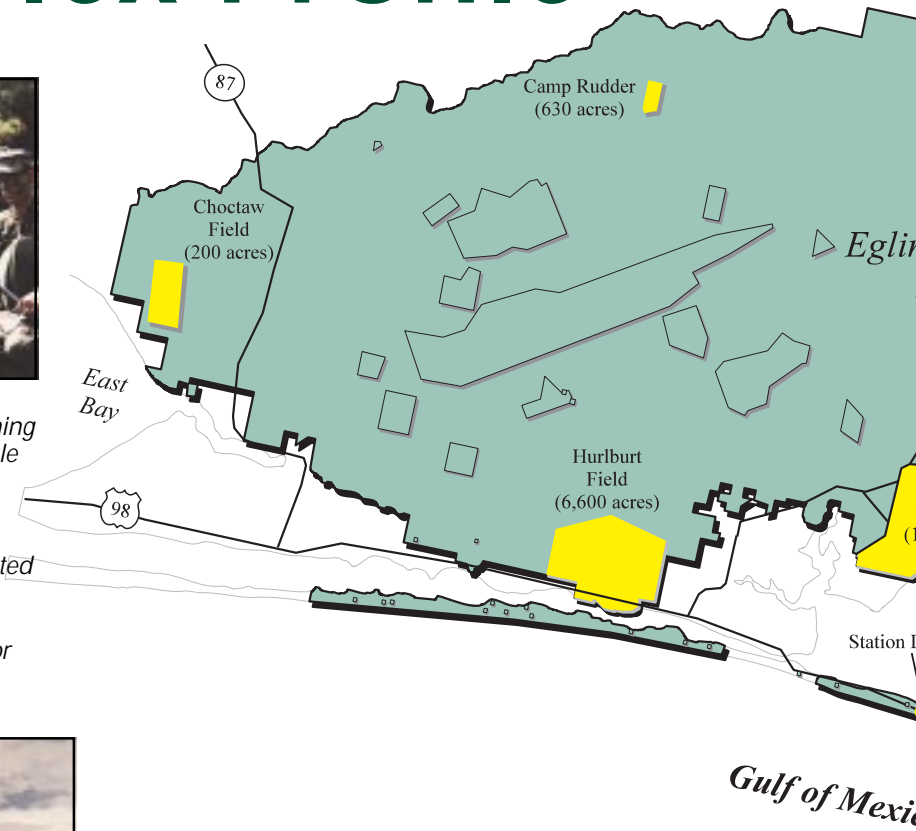
**Camp Rudder—U.S. Army 6th Ranger Training Battalion.** The 6th Ranger Training Battalion at Camp Rudder provides jungle phase training for the Army Rangers. Training includes parachute jumps and ground maneuvers throughout the Eglin AFB complex. Personnel move unrestricted through fringe areas of the complex and across test areas when access is not restricted due to other Range activities or safety considerations.

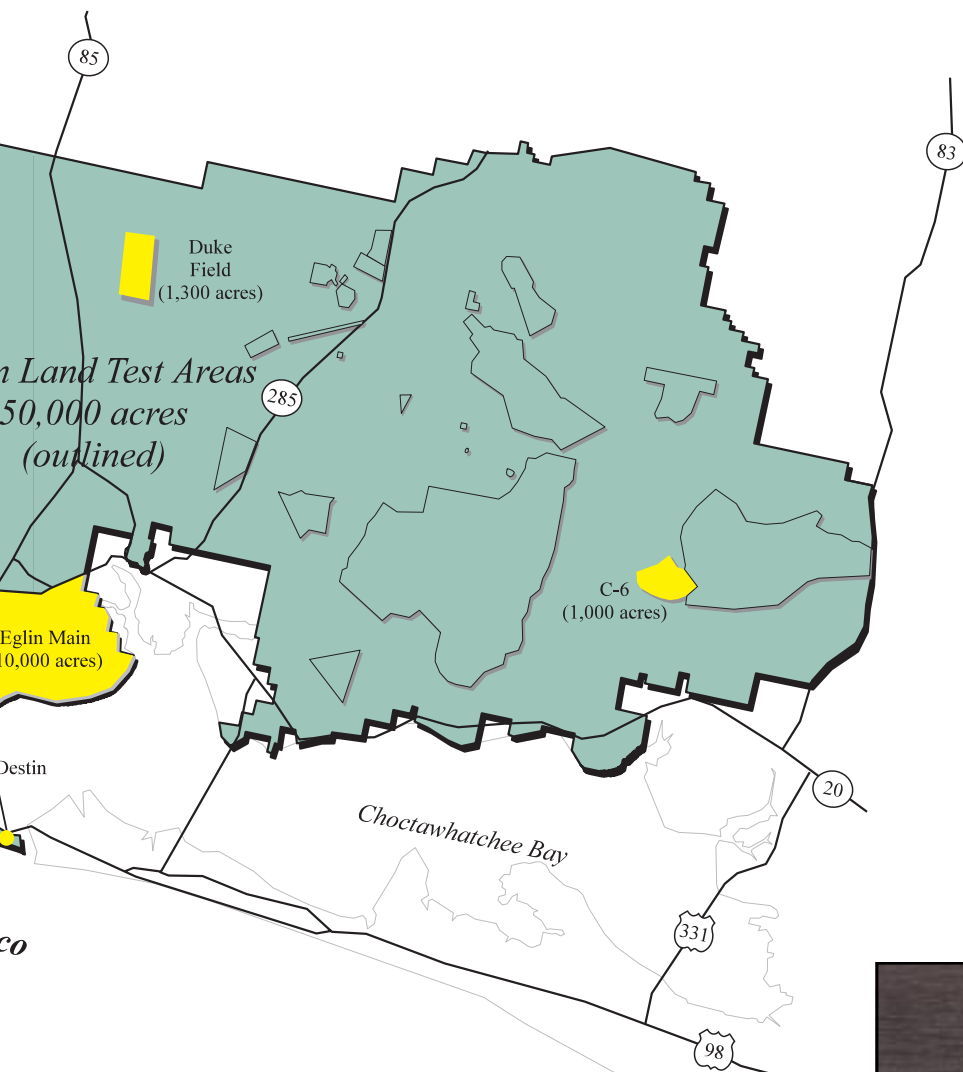


**Choctaw Field—Operated by Training Air Wing 6.** Based at Naval Air Station Whiting Field to the northwest of Eglin, Choctaw Field supports the mission of Naval Aviation by providing touch-and-go and primary flight training to Navy, Marine, Coast Guard, Air Force, foreign forces, and other fixed-wing flight students. Choctaw Field's location places it on Eglin land but underneath Navy-managed airspace.



**Hurlburt Field—16th Special Operations Wing.** The mission of the 16th Special Operations Wing (16 SOW) at Hurlburt Field is to organize, train, and equip Air Force special operations forces for global deployment. As part of the Air Force Special Operations Command, headquartered at Hurlburt, the 16 SOW deploys specially trained forces from each service working as a team. The 16 SOW manages a fleet of fixed-wing aircraft and helicopters. The wing also provides specialized training for other services, such as the Army Rangers and the Navy SEALs.





**Eglin Main—96th Air Base Wing.** The 96th Air Base Wing (96 ABW) at Eglin Main provides major medical, civil engineering, personnel, logistics, communications, computer security and all other host services to AFDTC units and associate units. In addition, 96 ABW is also responsible for one of the largest mobility functions for overseas deployment.



**U.S. Coast Guard Station Destin.** Station Destin's mission is to provide marine search and rescue, aids to navigation operation and maintenance, emergency assistance, and maritime law enforcement service in its assigned area. Station Destin also supports Eglin's mission activities on the water ranges.



**Duke Field—919th Special Operations Wing.** The 919th Special Operations Wing (919 SOW), an Air Force Reserve Wing at Duke Field, trains at Eglin AFB to provide aerial refueling of special operations helicopters and long-range troop and supply infiltration missions in support of the Air Force Special Operations Command. Humanitarian missions are also conducted by 919 SOW, providing medical and other assistance to countries of the Western Hemisphere.



**Site C-6—20th Space Surveillance Squadron.** 20th Space Surveillance Squadron operates and maintains a space tracking radar located in the eastern portion of the Eglin land complex in support of U.S. Space Command's surveillance mission. This unit detects, tracks, and identifies space objects and reports to higher command.



**The Eglin Range—46th Test Wing.** While mission responsibility for the research, development, testing and evaluation (RDT&E) lies with the AFDTC, the mission is accomplished primarily through the 46th Test Wing (46 TW). 46 TW supplies world-class testing and evaluation of armaments, electronic combat systems, guidance, and C4ISR (command, control, communications, computers, intelligence, surveillance and reconnaissance), and other specialized DOD systems on the ranges at Eglin. The testing and support organizations within 46 TW include the 46th Operations Group, the Technical Support Directorate, and the 46th Logistics Group.

# The Range

The Range exists to support the efforts of the warfighter with testing that ensures that USAF weapons systems will continue to be second to none. In addition to being the largest Air Force base in the world, Eglin contains the largest test range in the continental U.S., and the only supersonic range east of the Mississippi. With 17 miles of shoreline for littoral missions, the Eglin Gulf Test Range extends from Eglin almost to Key West. Future planning efforts must continue to concentrate on realizing the full benefit of the Range's capabilities.

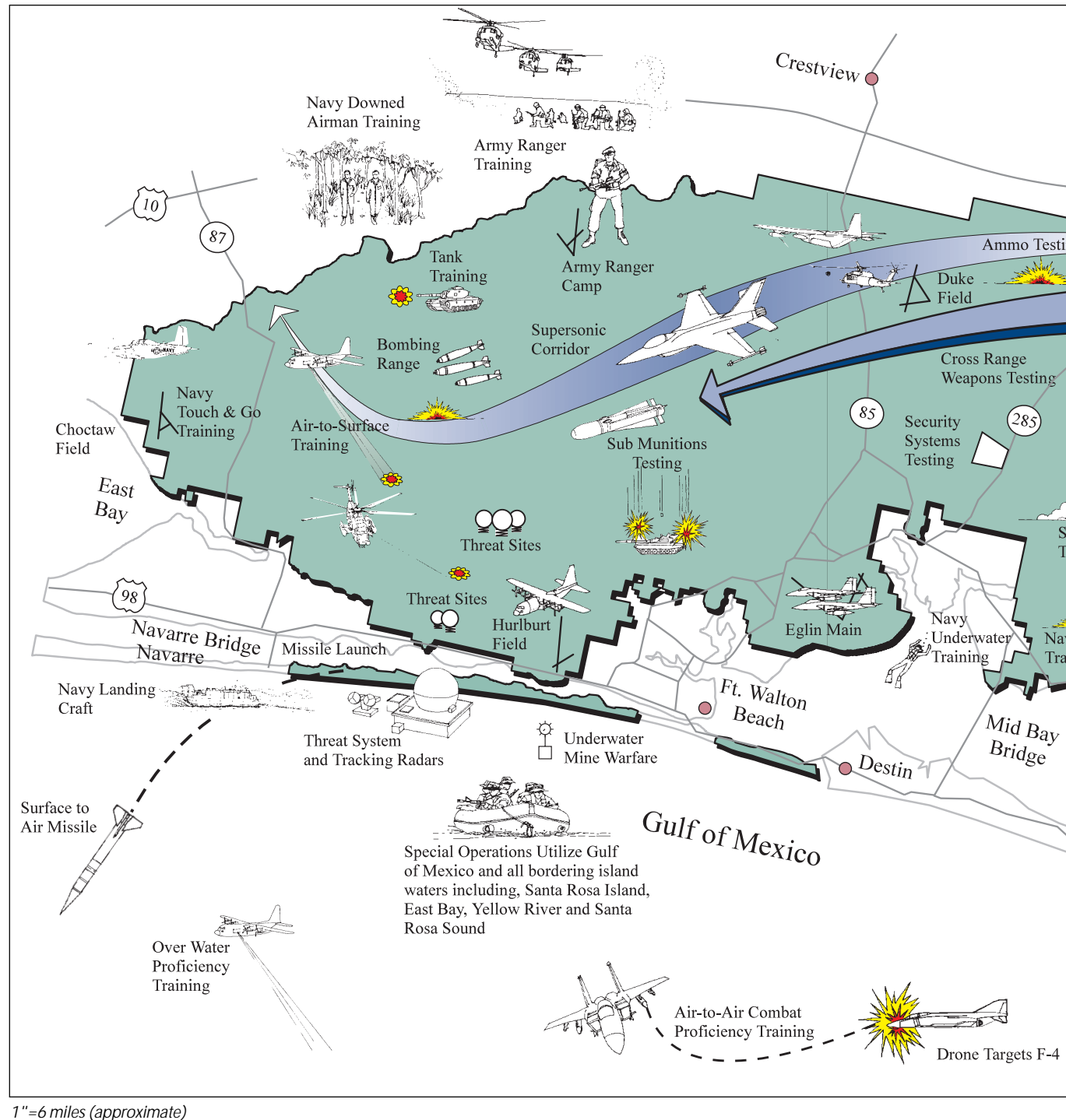
The Range is composed of four components generally referred to as its schedulable resources:

- Test Areas/Sites
- Interstitial Areas (areas beyond and between the test areas)
- The Gulf of Mexico
- Airspace (over land and water)

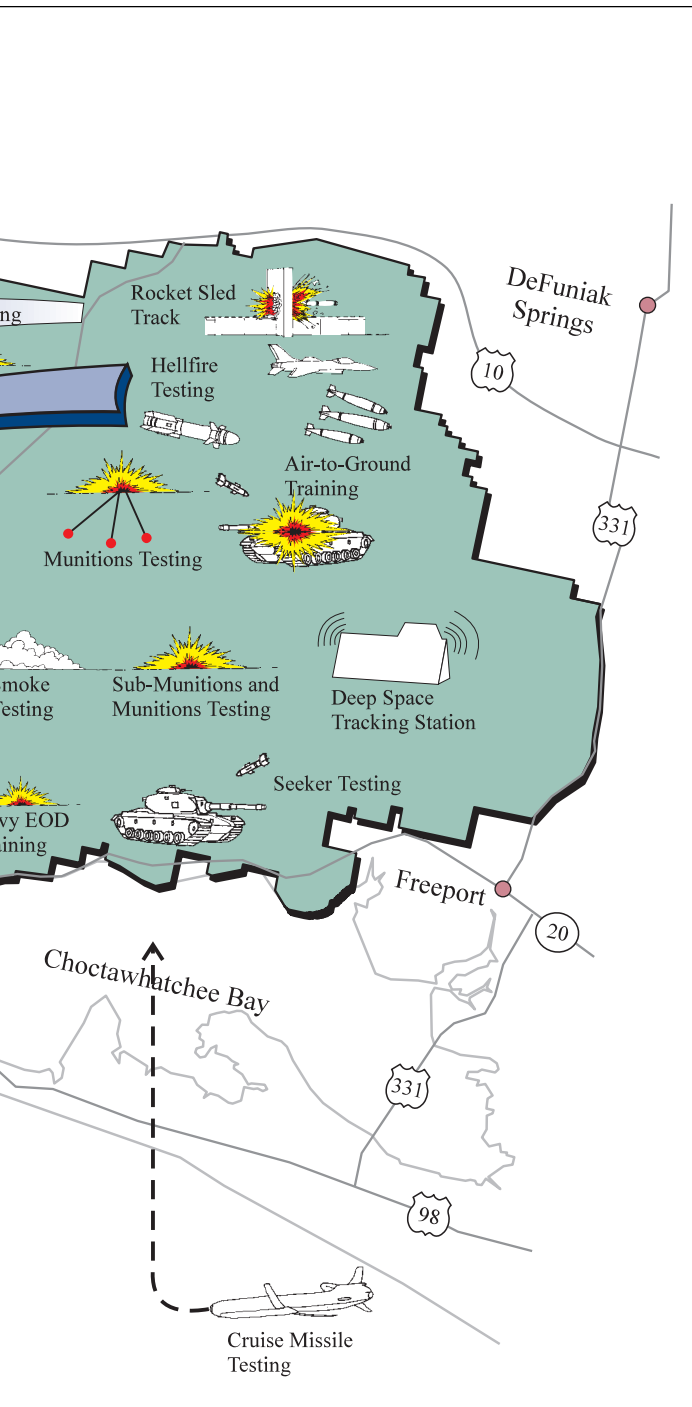
These areas work together to make the Eglin Military Complex a superior location for munitions testing. All of the land within the Eglin boundary is used to support Eglin's mission.



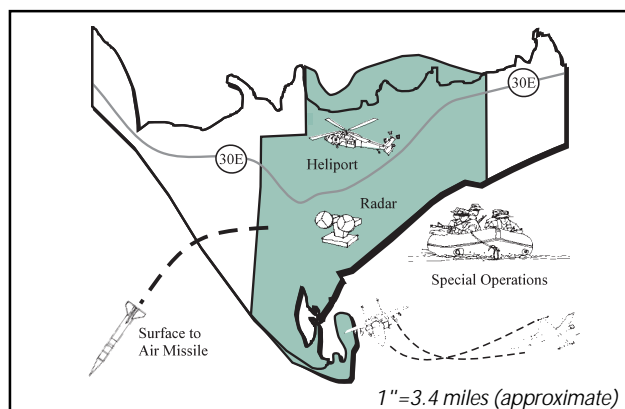
An F-15 fires an AMRAAM during a test mission over the Gulf of Mexico.





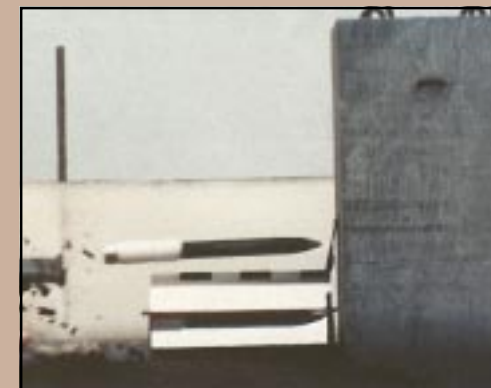


A surface-to-air missile battery fires a Patriot from Cape San Blas.



Cape San Blas

Enhanced weapons and armament testing to support national security



# The Range

## Test Areas/Sites

Test areas and sites are those **land areas where munitions and weapons testing occurs**. More than 50,000 acres of land range comprise the land-based test areas, test sites, and facility/equipment sites.



*Test Area B-70, which underlies the supersonic corridor, is approximately 12 miles long and heavily instrumented.*

Eglin enjoys a unique land range environment in that its 36 test areas vary among jungle conditions, rolling hills, heavily forested areas, water areas, and cleared flat areas. In support of these test areas are numerous test sites, locations of range instrumentation such as tracking radars, cameras, and data collection and transfer systems. These sites are strategically located throughout the Range, including Cape San Blas, to ensure maximum capability and redundancy of coverage for the wide variety of test programs supported. Many are found within the boundaries of the test areas.



*Test site on barrier island.*



*Looking west on Santa Rosa Island sites. Test sites on the barrier island are non-continuous and are spread across the island. (See map on page 13.)*

## Interstitial Areas

**Areas that exist beyond and between the test areas** are multi-use interstitial areas used primarily for safety. Comprising 390,000 acres, they are also used for training when scheduling permits, and for recreational purposes. Many are open to the public for hunting, hiking, boating, and fishing. Various threatened and endangered species habitats and other natural resources thrive in the interstitial areas. The continuation of the Range's award-winning ecosystem management efforts is critical to maintaining a natural balance within the Northwest Florida region.



*The longleaf pine is an important part of the ecosystem in the Interstitial areas.*





Test Areas and Sites (also see Cape San Blas map on page 11). Weapons safety footprints show how land outside the defined test area's boundaries is frequently encumbered for testing. Clearly, the entire land area of Eglin AFB is required to support safe and efficient mission accomplishment.



Test Area C-72 runway target.



Test Area C-80A.



Fragmentation Arena at C-80C.



# The Range

## Airspace

The airspace above and around the Eglin military complex is **the Range's most critical asset**. The Range's airspace includes areas over land and the Gulf of Mexico.

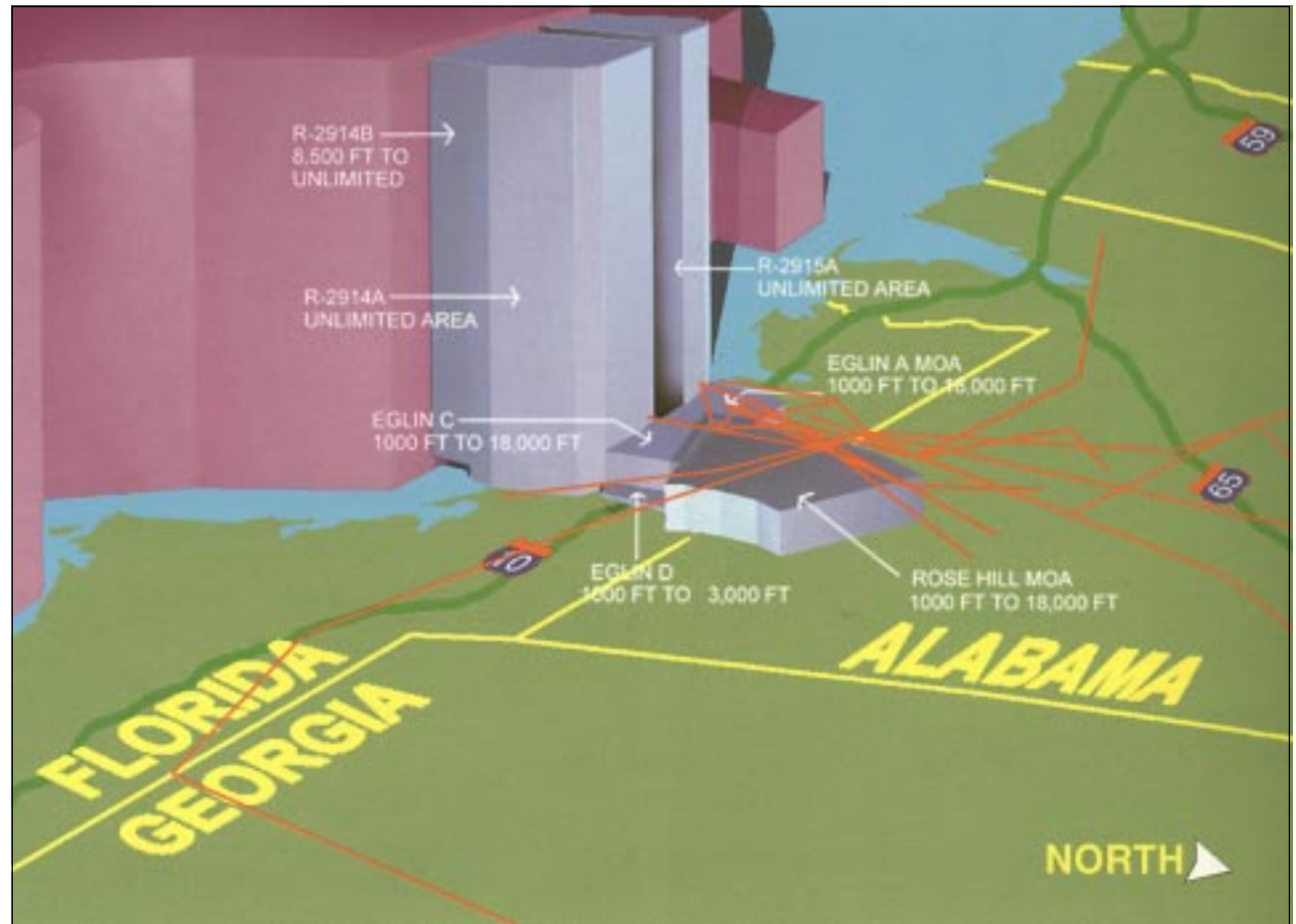
Eglin has Federal Aviation Administration (FAA) assigned special use airspace which is made up of the following:

- Restricted Airspace
- Military Training Routes (MTRs)
- Military Operating Areas (MOAs)
- Air Traffic Control Assigned Airspace (ATCAA)
- Slow Routes (low altitude)

In addition, Special Air Traffic Rule Corridors for general and commercial aviation transect the base. They are the north/south corridor and the east/west corridor.

Ongoing accomplishment of the Range's enhanced weapons testing mission hinges on continued unencumbered access to this airspace. Overland restricted airspaces and MOAs in Alabama and Florida are included.

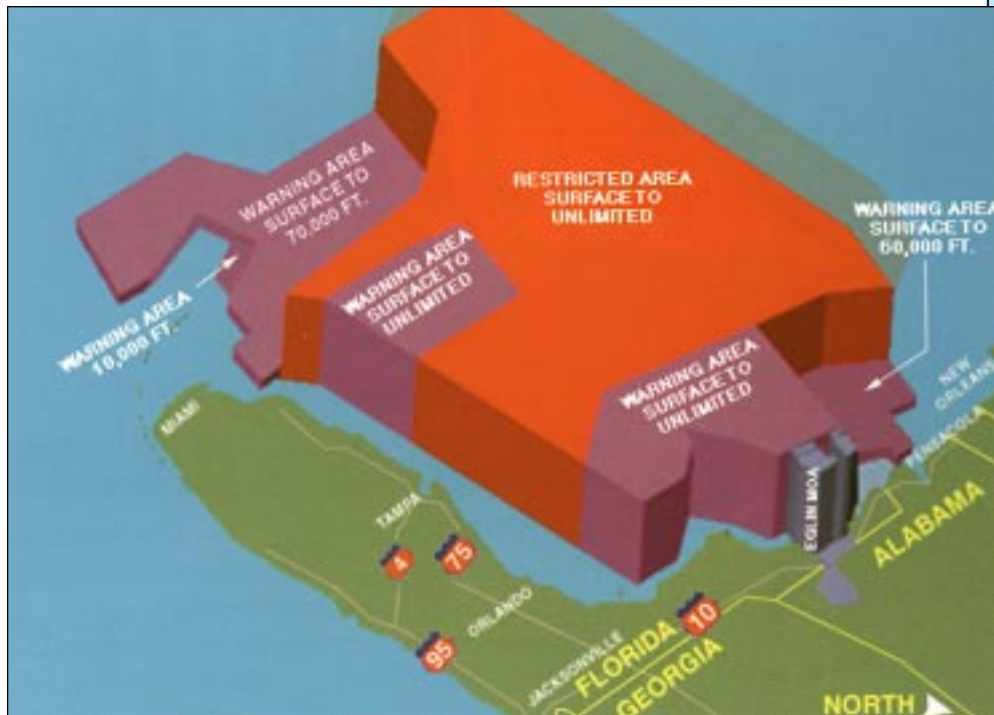
Low level and high speed ingress/egress routes are used all around the perimeter of the Range. Development on our boundary must be air-space compatible for these routes as well as any future missions.



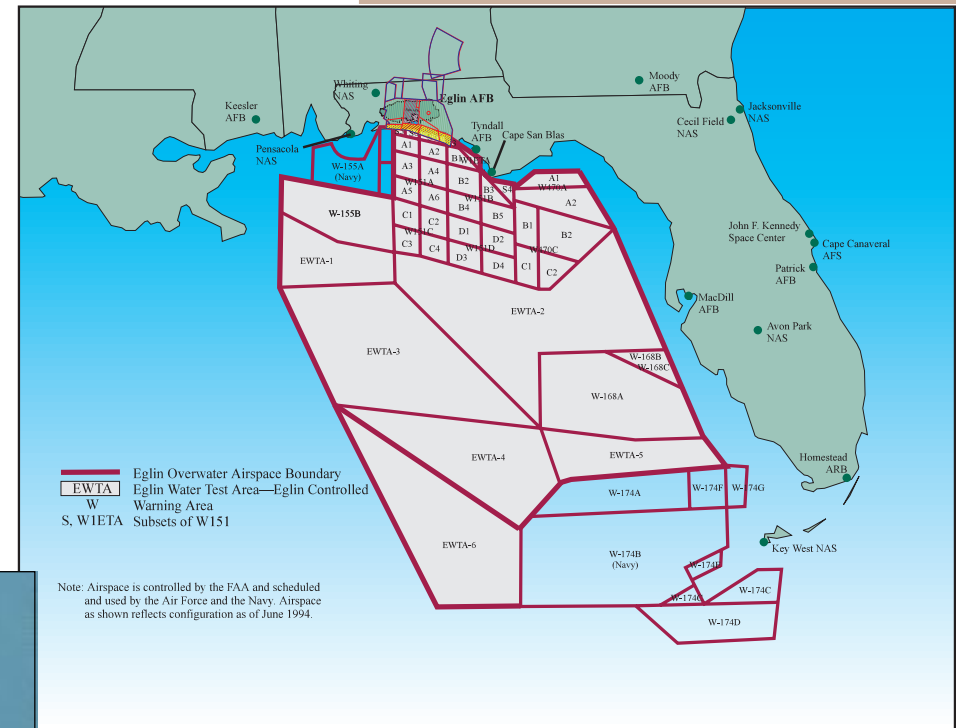
Overland airspace with adjacent Gulf airspace (looking southwest). Low/slow routes show as red lines.

# Gulf of Mexico

Through agreement with the FAA, Eglin operates and schedules activities in the airspace overlying the eastern third of the Gulf of Mexico. These ranges represent **the largest water test area in the continental U.S.**, with more than 130,000 square miles of airspace. Scheduled activities include long-range, all-altitude, air-to-air activities including aerial target operation, electronic combat, and long-range air-to-surface and surface-to-surface programs.



The Eglin overland and overwater airspace is the largest in the continental U.S., covering more than 130,000 square miles (looking southwest).



The overwater test areas are nearly as large as the combined land mass of Georgia and Alabama.

The Eglin Gulf Test Range is composed of:

- Air Force Controlled Warning Areas
- Eglin Water Test Areas
- Navy Controlled Warning Areas

The unique features of the Eglin Gulf Test Range include its immense size, relative freedom of non-participatory surface and air traffic, and excellent instrumentation coverage in the northern portion. Perhaps more importantly, this large overwater airspace is directly connected to Eglin's overland airspace, providing ready access to the land test areas across an important land-sea transition zone.

# Planning Context

Comprehensive planning for the Eglin Military Complex is executed by three separate wings due to the vastness of the land, sea, and air-space resources plus the diversity of mission areas. As host unit, AFDTC provides oversight for comprehensive planning.



## 46th Test Wing

**46th Test Wing** is engaging in the first efforts to accomplish a comprehensive plan for the Range (land, sea, and airspace). A Range Environmental Planning Office (46TW/XPE) has been established jointly by the Wing and Environmental Management to initiate the effort.

This document represents the framework for all future Range planning by the Test Wing.



## 96th Air Base Wing

**96th Air Base Wing** is the traditional focus for air base planning. At Eglin AFB, the Wing's focus through the 96th Civil Engineering Group is on the cantonment areas of the complex for which extensive planning continues to take place for the following:

- Eglin Main Base
- Duke Field
- Camp Rudder
- Choctaw Field
- Site C-6
- Santa Rosa Island



## 16th Special Operations Wing

**16th Special Operations Wing** at Hurlburt Field is responsible for planning at Hurlburt because it is under the control of a separate major air command: AF Special Operations Command. Hurlburt's comprehensive plan has been developed aggressively over the last few years to support extensive growth. The Wing maintains representation on numerous community committees due to its size and unique mission.



## Military Planning Integration

**AFDTC Executive Council**, functioning as the Facilities Board, is the highest level planning body at Eglin. Under the chairmanship of the Test Center Commander, it has approval authority over all development plans for the Eglin Military Complex with the exception of Hurlburt Field.

The following three bodies are subordinate to the Executive Council:

**AFDTC Encroachment Committee** is under the chairmanship of the AFDTC Director of Requirements (AFDTC/DR) and is responsible for

coordinating military responses to community requests for Air Force real estate such as easements, outgrants, or transfers.

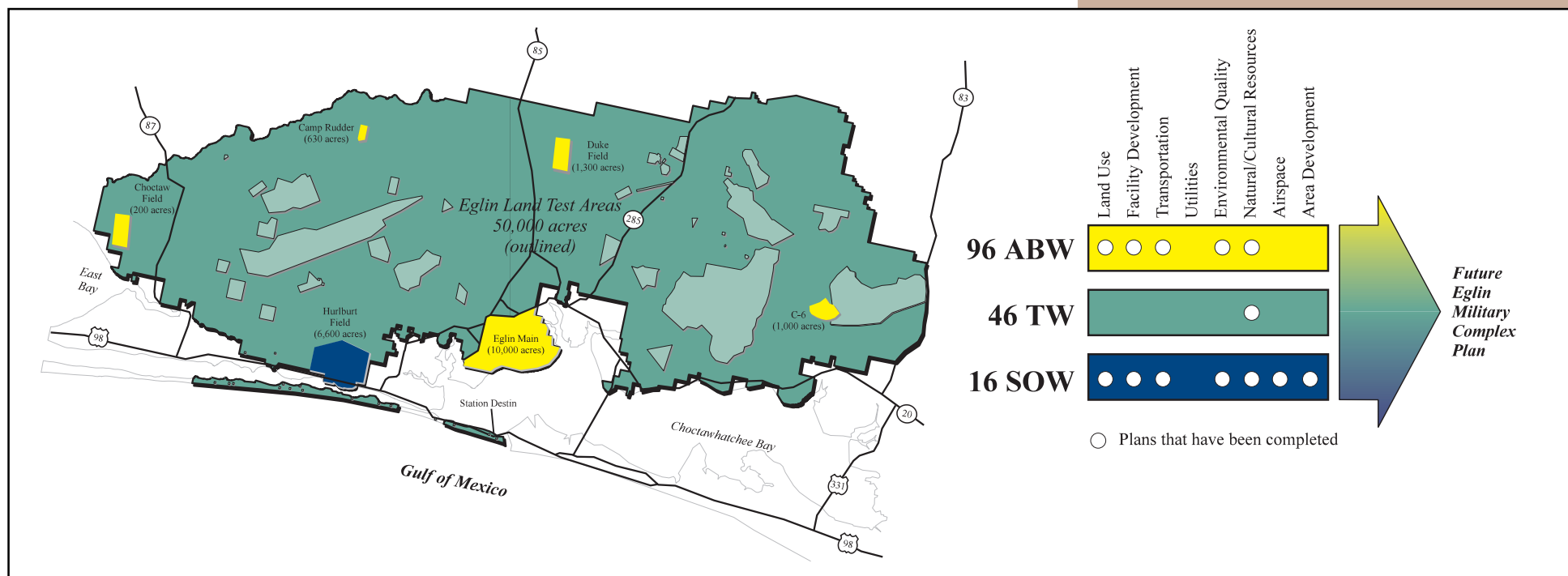
**Future Development Committee** is the 96th Air Base Wing Commander-chaired senior planning body for cantonment areas.

**Range Development Executive Steering Committee** is the 46th Test Wing Commander-chaired planning body for the Range.

**Hurlburt Field Facilities Board** is the planning approval body for Hurlburt Field under the chairmanship of the 16 Special Operations Wing Commander.

*“For tomorrow, we must ensure that today’s decisions are not short-sighted; that we chart a prudent and stable course for modernization and not allow short-term solutions to jeopardize our long-term security and national industrial base.”*

—Dr. Sheila E. Widnall  
Secretary of the Air Force



Eglin Military Complex Comprehensive Plans Status by Component Plan

# Planning Context

Range planning cannot occur in isolation. Before a coordinated plan can be pursued, regional development plans must be considered.

## The Communities

For more than 10 years, the State of Florida has mandated through the Local Government Comprehensive Planning Act that all counties and incorporated communities have comprehensive plans and land development codes. The existing entities with such plans are shown on the map. These plans provide insight into the future direction of the region. New comprehensive plans are being developed for two of the fastest growing regions, Navarre Beach and South Walton Land Trust.

**West Florida Regional Planning Council** is the organization established by Florida to coordinate development which has regional impact. It provides intergovernmental coordination between state and local governments, acts as mediator of local governmental conflicts, and prepares the Strategic Regional Policy Plan. This plan recommends airport overlay zoning to protect military bases and civilian airports. Such zoning may restrict heights of structures and prohibit incompatible land use densities. They also serve as staff to regional planning bodies such as Metropolitan Planning Organizations for transportation.

**The Northwest Florida Water Management District** is one of five Florida regional authorities ensuring comprehensive regional water management. The District issues water consumptive use permits and has declared the coastal areas of the region as a Water Resource Caution Area due to excess groundwater withdrawal.

Coordination of municipal comprehensive plans within a county are the responsibility of **County Comprehensive Planning Committees** as required by the Government Comprehensive Planning Act.

## Regional Coordination Mechanisms

### *Military Lead*

**AFDTC Encroachment Committee.** This committee, lead by the AFDTC Director of Requirements, is charged by the AFDTC Commander to interface with the community for planning matters. All community requests for land or access to military property must go through the committee.

**Air Installation Compatible Use Zones Program.** The Air Force provides to the communities standard recommendations for compatible land use in the vicinity of military airfields. There is an AICUZ for the Eglin Main Base airfield and Hurlburt Field.

### *Community Lead*

## State of Florida:

**Clearinghouse.** This entity is the focal point for intergovernmental review of federal programs in support of Executive Order 12372 in accordance with the Department of Defense Memorandum of Understanding of 1986.

**West Florida Regional Planning Council**  
**Northwest Florida Water Management District**

## Regional:

**Fort Walton Beach Metropolitan Planning Organization.** This transportation organization covering Okaloosa and Walton counties has the AFDTC Director of Requirements as the military advisor.

**Pensacola Metropolitan Planning Organization.** This organization covers Santa Rosa County on Eglin's western end and Escambia County with Pensacola.

**Regional Utility Authority**

## Okaloosa County:

**Comprehensive Planning Committee.** Air Force representatives from Eglin, Hurlburt Field, and the Encroachment Committee are advisors.

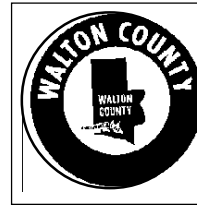
**Aviation Advisory Board.** Ex-officio members for Hurlburt and the Encroachment Committee are part of the Board.

## Santa Rosa County:

**Intergovernmental Action Committee**

## Walton County:

**Comprehensive Planning Forum**

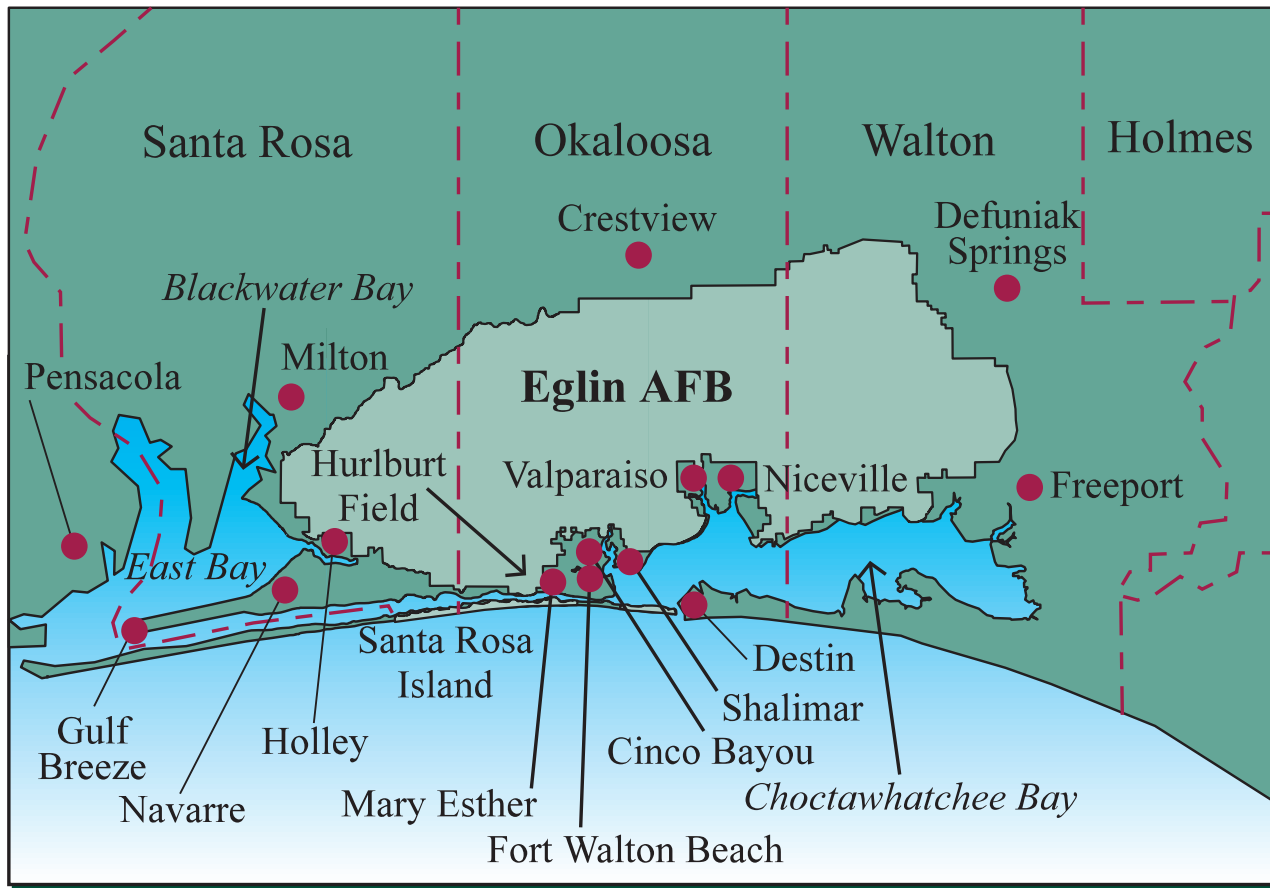


With 464,654 acres, Eglin AFB covers:

10.0%  
Santa Rosa County

40.9%  
Okaloosa County

22.6%  
Walton County



Counties and incorporated towns with comprehensive plans in the Eglin AFB Region of Influence

*"We believe we can continue to work with the community to achieve compatibility between our military mission and community needs."*

—Air Force Development Test Center,  
Executive Council  
May 1995

*"Indications are that the growth will continue. The challenge will be to direct the growth so that it's healthy."*

—Jim Breitenfield  
Executive Director  
Okaloosa County  
Economic Development Council  
February 1996



# Range Planning Areas

Airspace

Transportation

Gulf of Mexico

Land Use

Infrastructure

Environmental

An important step in developing effective planning for the Range is identifying the various planning areas that affect it. While the planning areas are presented and discussed here within various general categories, many of them overlap between categories. Some of the planning areas relate to the natural resources of the Range and communities, others to the Range's capital investment. In any event, the overall measure of the planning areas' effect is their influence on people, both on the Range and within the communities that surround it.

By combining the planning areas with the vision for the Range, specific goals will be identified to support the Range's primary goal: to continue its role as the U.S. Air Force's premier enhanced weapons testing and training location.

## Airspace

The airspace over the land and water ranges is critical to the fulfillment of the Eglin military complex's missions. Planning areas affecting this valuable resource relate primarily to community growth and internal coordination of missions.

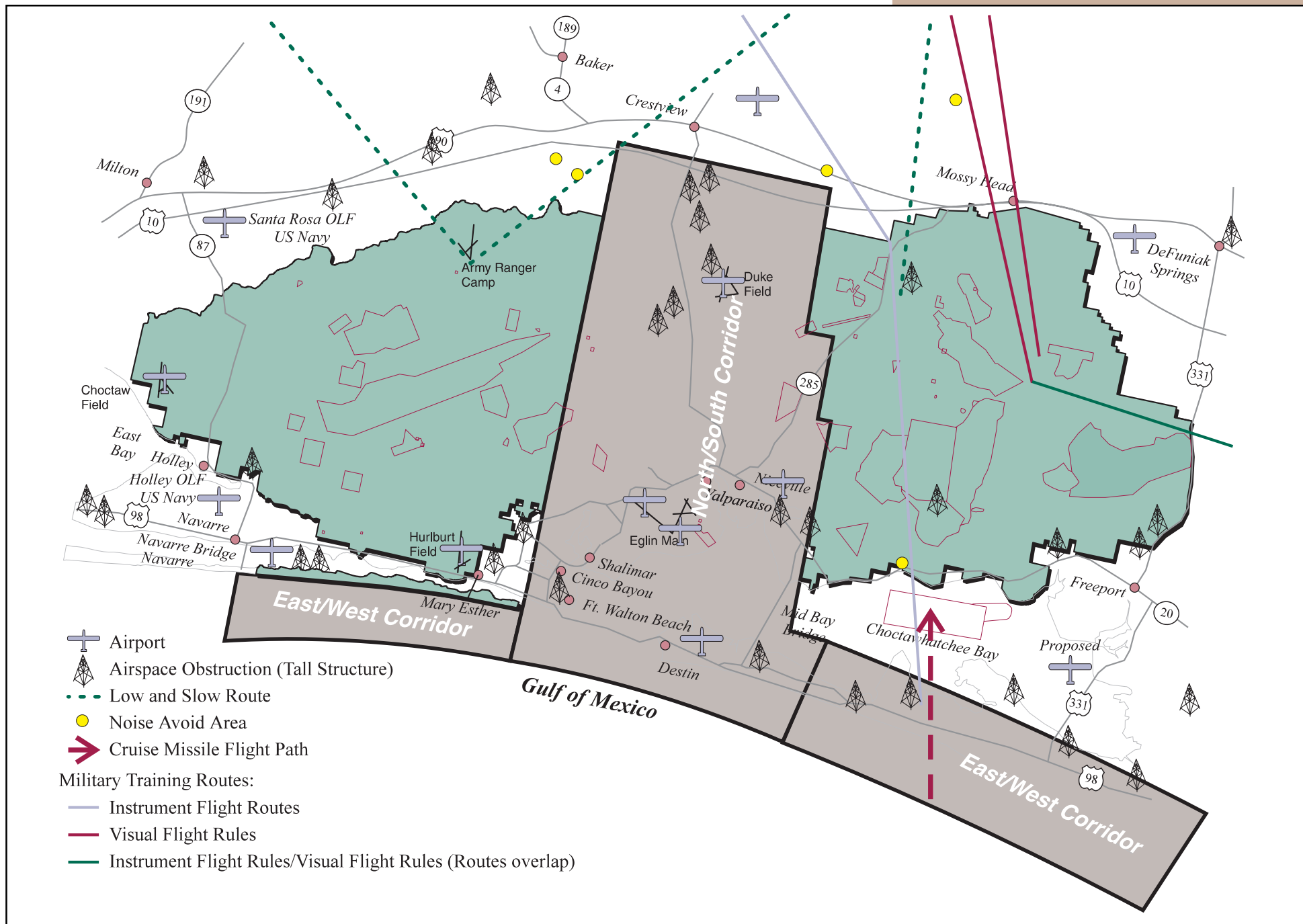
- **A-1: Commercial and General Aviation.** Community growth creates both increased demand for air transportation and Range airspace concerns. There are 29 public, military, or private airports within the region.



Tall structures and towers can encumber the Range's aviation needs.

- **A-2: North/South Corridor.** Growing north/south corridor use by commercial aircraft creates problems for air-to-air and ground-to-ground training and test missions. FAA regulations in the corridor limit cross-range testing except for air-to-ground testing for which the Air Force has priority.

- **A-3: Tall Structures.** Construction of towers, high-rise buildings, and other structures can create problems for aircraft. *The number of obstructions within Eglin's region of influence grew 14 percent between 1984 and 1992 and the trend is expected to continue.* However, the inherent dynamics of the airborne portion of Eglin's mission requires significant flight path flexibility.
- **A-4: Low-level Entry and Egress Points.** The ability to provide testing and training capabilities of 500 feet and below is essential to the future of the Range. Low-level corridors need to be preserved to meet the needs of existing weapon systems and future testing and training programs. Development along these corridors can negatively impact their use.
- **A-5: Compatibility of Land Use Underlying Special Use Airspace.** Use of airspace may be constrained by growing incompatibility of development under special use airspace. Incompatible uses, both on and off base, can create mission limitations.
- **A-6: External Encroachment.** Modifications to current air routes in Gulf airspace are being entertained by international treaty (see map on page 29). Access to this valuable Range asset could be constrained.



Airspace Planning Areas

# Range Planning Areas

Airspace	Transportation	Gulf of Mexico
Land Use	Infrastructure	Environmental

## Land Use

Land use planning areas include operational conflicts among Range users, the Range's impact on the communities' growth objectives, and the impact of the growing local communities on the Range.

- **L-1: Compatible Land Use Adjacent to the Eglin Complex.** New development on the Range perimeter sometimes occurs without consideration of compatibility with Eglin missions. High wires and bright lights adjacent and around the land range interfere with operations.
- **L-2: Recreational Access to Range.** Recreational activities can conflict with Eglin training and testing missions. Recreational users of the Range must be cleared from the area before some testing can occur.
- **L-3: Noise.** Noise generated on the Range is an issue that not only affects the community (sonic booms, munitions testing noise, etc.) but also Range operations. Real-time weather data, available at 10 sites around the land range, can be of limited value for occasional specific missions.
- **L-4: Safety.** Buffer areas, including the one-mile Impact Limit Line around the perimeter of Eglin AFB, ensure the safety of Eglin personnel and citizens beyond Eglin's borders. *While these areas may appear to be*
- **L-5: Public Use.** Range lands are used for a variety of public purposes. Examples include sewage effluent spray fields, roads, utility corridors, potable water sources, etc. There are frequent requests for use of Range land for other temporary uses including sports complexes and festivals.
- **L-6: Irregular Boundary.** Eglin's irregular boundary promotes public perception of unused land. Borders around populated areas often contain unusually shaped, small land segments. These areas are part of the aggregated safety footprint based on the Range perimeter.
- **L-7: Capacity for Additional Use.** Some areas of the Range may support additional military missions. Decreasing access of DOD range users to other ranges (e.g., offshore California) may result in the possibility of Range mission increases. The Range must be able to position itself to take advantage of these opportunities.
- **L-8: Future Use of the Barrier Island.** The island is a unique Range asset. Various entities have expressed an interest in using it

*unused land, they are necessary.* Modern weapons testing requires large safety footprints due to their flight and terminal characteristics, and an aggregated safety footprint at the boundary protects the surrounding area from test item debris.

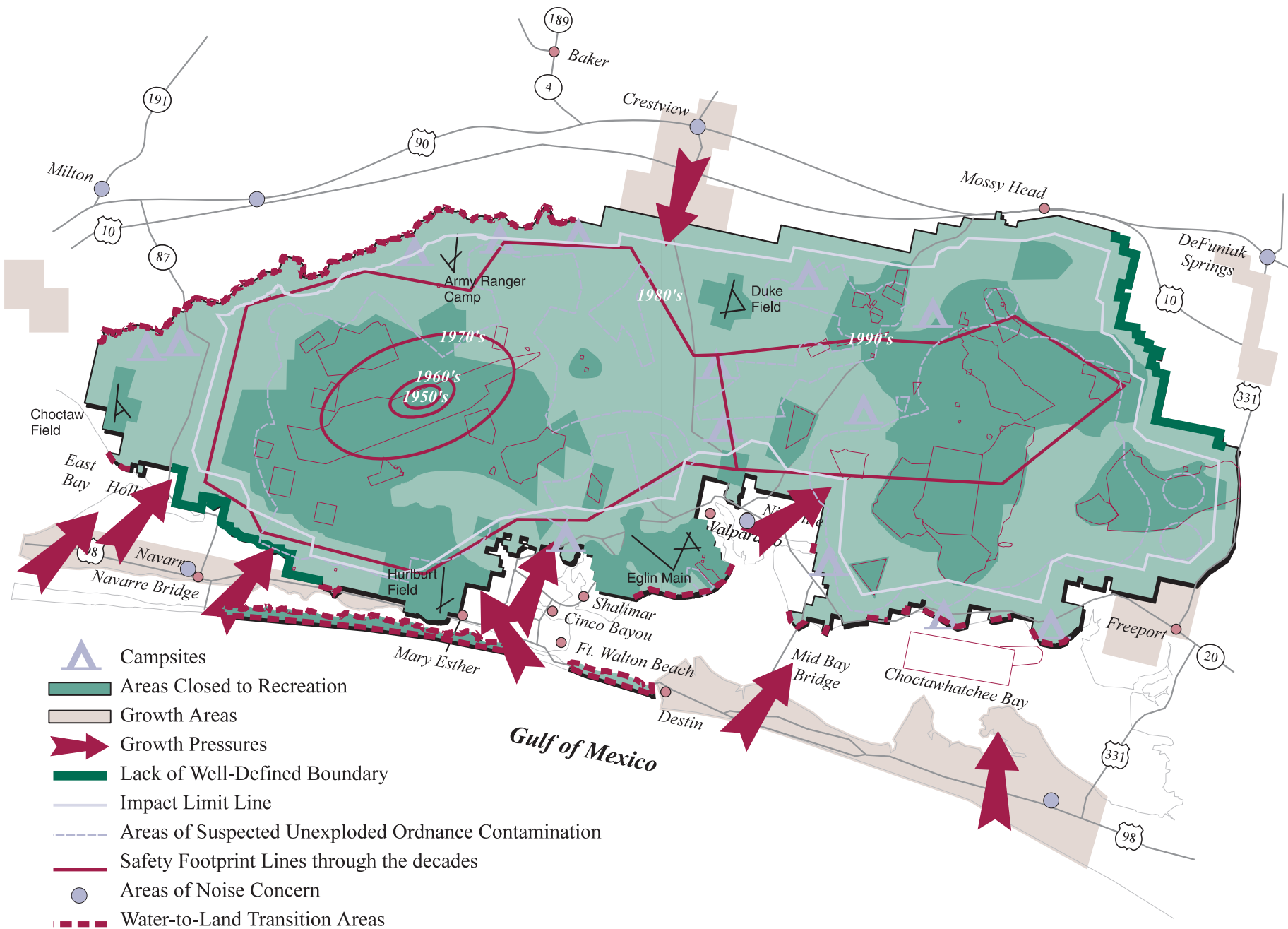
for purposes not related to Range activities, such as recreation. Continued unrestrained military use of this island is critical to supporting new missions.

- **L-9: Coordination of Land Use.** Land use coordination between the local community, internal organizations, and the military is critical and recognized in Air Force Guidance and state planning regulations. Past, current and potential future uses of AF lands are key ingredients to this process.



*Aerial photo shows that development of the island within the Eglin boundary is tightly controlled (left) in order to retain maximum mission support capability and flexibility.*





Land Use Planning Areas

# Range Planning Areas

Airspace

Transportation

Gulf of Mexico

Land Use

Infrastructure

Environmental

## Transportation

From mission and environmental concerns about Range roads to community requirements for highway access through and around the Range, transportation planning areas impact both short- and long-term Range planning.

- **T-1: Urban Area Transportation.** Community growth is degrading regional road levels of service. Proposed enhancements include widening, construction of interchanges, and realignment. These enhancements present serious questions regarding encroachment on the Range.
- **T-2: Access Points.** Across the nearly 200 miles of boundary and rights-of-way Eglin shares with the public, innumerable points of access to the land range exist. Some are authorized, many are not. Test safety and security can be compromised by trespassers on Range property. Access to the Range must be controlled to ensure safety and to prevent nuisances such as illegal dumping, poaching, and other illegal uses.
- **T-3: Range Roads.** The Range road network was not designed to support current Range operations. The numerous access points, inconsistent capacity, generally poor condition, and lack of hierarchy create a road system that marginally meets—with excessive maintenance—the basic needs of Range users.
- **T-4: Hurricane Evacuation.** Current regional evacuation routes utilize Eglin land extensively. Continued population growth in the region is forcing study of options to provide increased capacity, involving potential additional impact to the Eglin Range and mission.
- **T-5: Increase in Commercial Air Traffic.** Community growth is driving increased demand for air service at Okaloosa County Air Terminal, which recently sought and received approved increases in daily and charter operations. More commercial flights constrain cross-range testing due to scheduling difficulties.



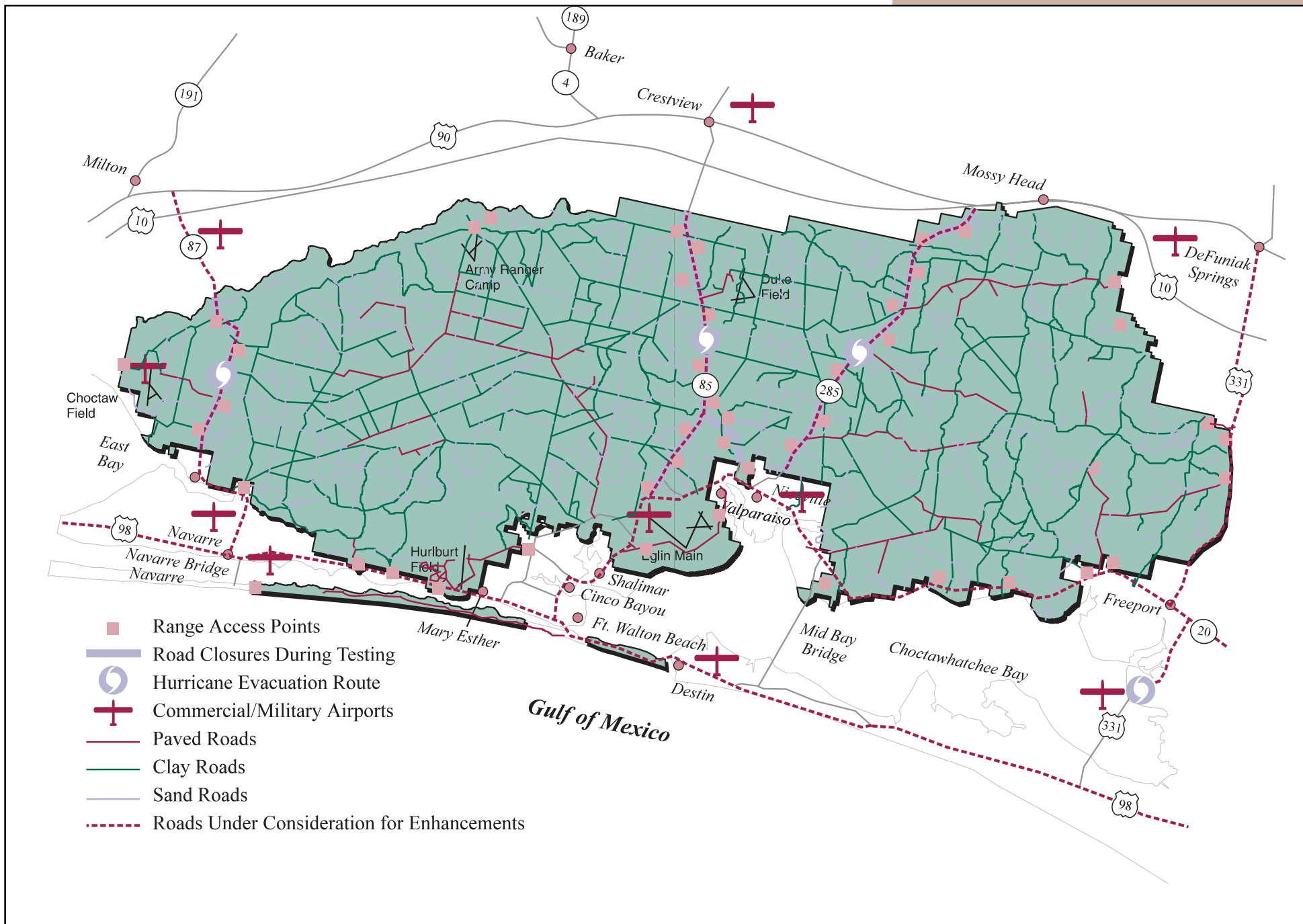
*Hurricane evacuation can cause massive traffic jams as occurred in 1995 during Hurricane Opal.*

- **T-6: Road Closures for Testing.** Occasional testing-related road closures are an inconvenience to traffic on roads within the test safety footprint. In the future the potential impact of road closures could be compounded by increased traffic and improvements scheduled to increase road capacity.



*Typical clay surface Range roads. A well maintained, heavily traveled road (above) in contrast to an example of a marginal road.*





Transportation Planning Areas



# Range Planning Areas

Airspace	Transportation	Gulf of Mexico
Land Use	Infrastructure	Environmental

## Infrastructure

Growing demands placed on the infrastructure of both the Range and the Northwest Florida region have underscored the need for improvements.

- **I-1: Targets.** Target debris has accumulated on test areas over time. An enhanced system for disposition of this debris is being formulated.
- **I-2: Range Instrumentation.** Autonomous and large standoff weapons require enhanced telemetry systems. Such systems may be Global Positioning Systems (GPS) based. Range instrumentation is in need of upgrade to keep pace with advances in enhanced weapons systems.
- **I-3: Information Management.** Range information (environmental constraints and opportunities, planned projects, safety and instrumentation, etc.) is not readily available to users of the Eglin Military Complex for many reasons. Economy of data gathering efforts and sharing of relevant information are not being optimized.
- **I-4: Water Drawdown.** The Northwest Florida region along the coast has been declared a Water Resource Caution Area. The Floridan aquifer has been subjected to a 90-foot drawdown since 1948. This problem is compounded by saltwater intrusion. Eglin's surface water has been identified as a potential water source by surrounding communities.

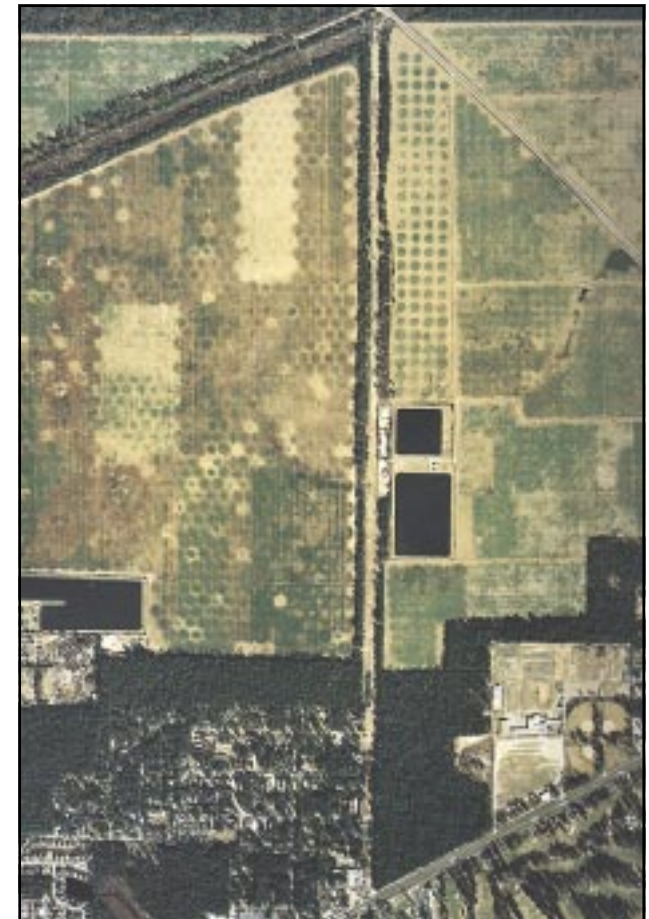
- **I-5: Spray Fields.** The Air Force permits local communities to use its land for spray fields through outgrants. As regional population grows, the demand for additional land for this use will also grow.



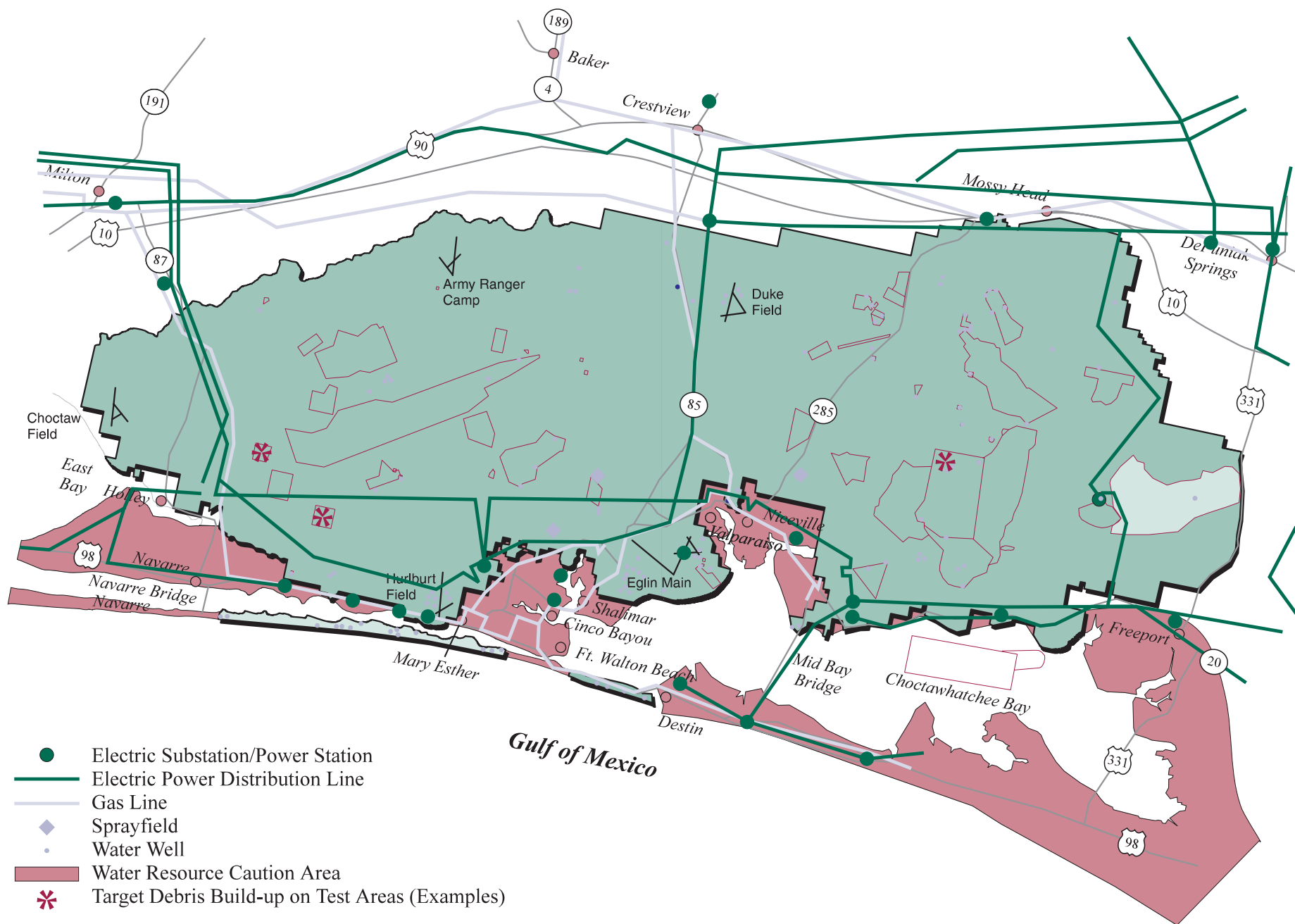
*Island electronic combat site.*



*Debris from targets such as this tank can contain a variety of materials that must be properly handled.*



*City of Fort Walton spray fields on Eglin Range north of Lewis Turner Boulevard.*



Infrastructure Planning Areas

# Range Planning Areas

Airspace

Transportation

Gulf of Mexico

Land Use

Infrastructure

Environmental

## Gulf of Mexico

Evolving use of the Gulf of Mexico by the military can impact other activities in the Gulf.

- **G-1: Targets.** Eglin needs to provide target support within the Gulf Range. For example, theater missile defense requires long-range targets for realistic testing scenarios.
- **G-2: Land/Water Transition.** The land/water transition, including the barrier island, is one of Eglin's most critical assets and must be preserved to ensure the Range's long-term viability. Missions using the land/water transition include weapon system test and evaluation, training, and electronic combat.
- **G-3: Protection of Gulf Environment.** Eglin recognizes the Gulf as having sensitive resources that must be protected during mission activities.
- **G-4: Offshore Mineral Exploration.** The eastern Gulf region, which underlies Gulf airspace, has been identified for significant oil and gas exploration. This activity could present potential conflict to the use of the Gulf Range.
- **G-5: Surface Ships.** Control of Gulf airspace extends to but does not include the surface. The cooperation of non-military watercraft with our needs is required for safe and efficient mission accomplishment.

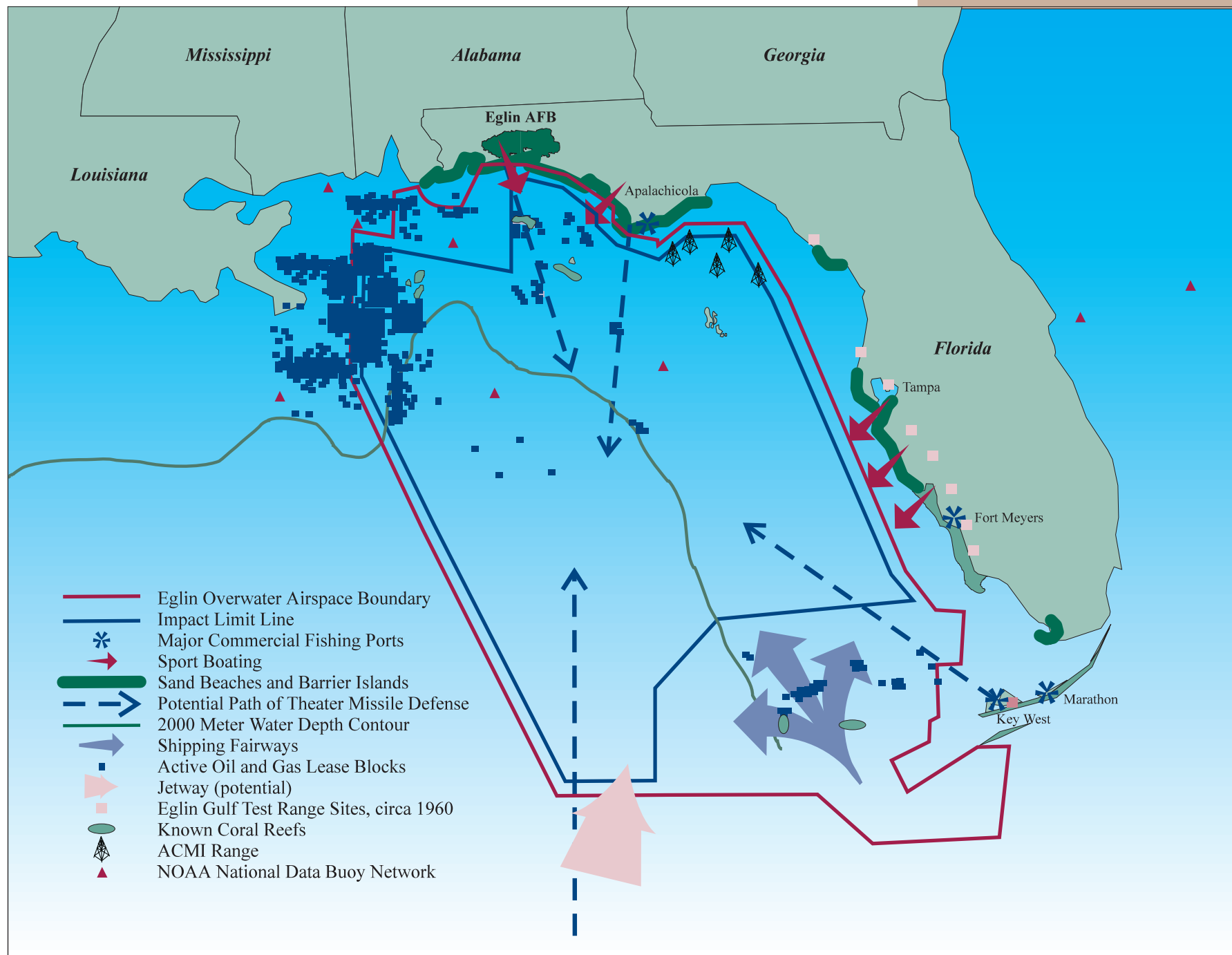
- **G-6: Gulf Instrumentation.** During the 1950s and 1960s, the Eglin Gulf Test Range supported missile testing with a series of radar and telemetry sites along the coast of Florida from Eglin to Key West. Most of these sites were closed in the '70s. To reinstitute

long-range missile testing in the Gulf, an instrumentation system must be re-established. Such a system could also supplement mission support areas like the Air Combat Maneuvering Instrumentation (ACMI) range underlying the W-470 Gulf airspace.



*F-4 Phantom jets in formation. These aging planes are being refitted for service as air-to-air drones.*





Gulf of Mexico Planning Areas

# Range Planning Areas

Airspace	Transportation	Gulf of Mexico
Land Use	Infrastructure	Environmental

## Environmental

Harmony of the environment with the Eglin mission has been the keystone of Eglin AFB. Stewardship of Eglin's valuable natural resources will continue to be a top priority.

- **E-1: Natural and Cultural Resource Protection.** Eglin is nationally recognized for its award-winning Natural Resources Management Program—the best in the DOD—based on ecosystem management. The maintenance of healthy ecosystems is the basis for protecting endangered species such as the red-cockaded woodpecker and the Okaloosa darter. Maintenance of these programs is essential for good environmental stewardship based on ecosystem management.



*Eglin's natural resources activities have helped protect threatened and endangered species such as the red-cockaded woodpecker (left) and the Okaloosa darter.*

- **E-2: Erosion.** The sandy soil on the Range is very susceptible to erosion. Erosion of the 1,300 miles of clay roads and 162 clay pits can impact water quality, including the habitat of the endangered Okaloosa darter,

and wetlands. Additionally, operation and maintenance costs for clay roads is high and closure of abandoned clay pits is a lengthy and expensive process.

- **E-3: Fire Management.** Range activities cause range fires. Past practice was to extinguish these fires, but current ecosystem management allows most to burn to supplement an extensive prescribed burn program of 50,000 acres per year. Such burns are an essential tool in ecosystem management and enhance the Sandhill-Longleaf Pine ecosystem, home of the red-cockaded woodpecker. Prescribed burns also reduce the threat of wildfires and aid in keeping fires on the Range and away from adjacent populated areas.

- **E-4: Unexploded Ordnance.** Nearly 45 percent of the land Range is suspected of unexploded ordnance contamination. Due to the low probability of hazard, access to some of these areas is not restricted. However, there is a risk to personnel. (See Land Use Planning Areas map.)

- **E-5: Water Resources.** Ground water has long been an issue in this area due to the diminishing supply. Eglin's surface water is being looked to as a source by the community. Growth in the area will only cause additional demand for this finite resource.



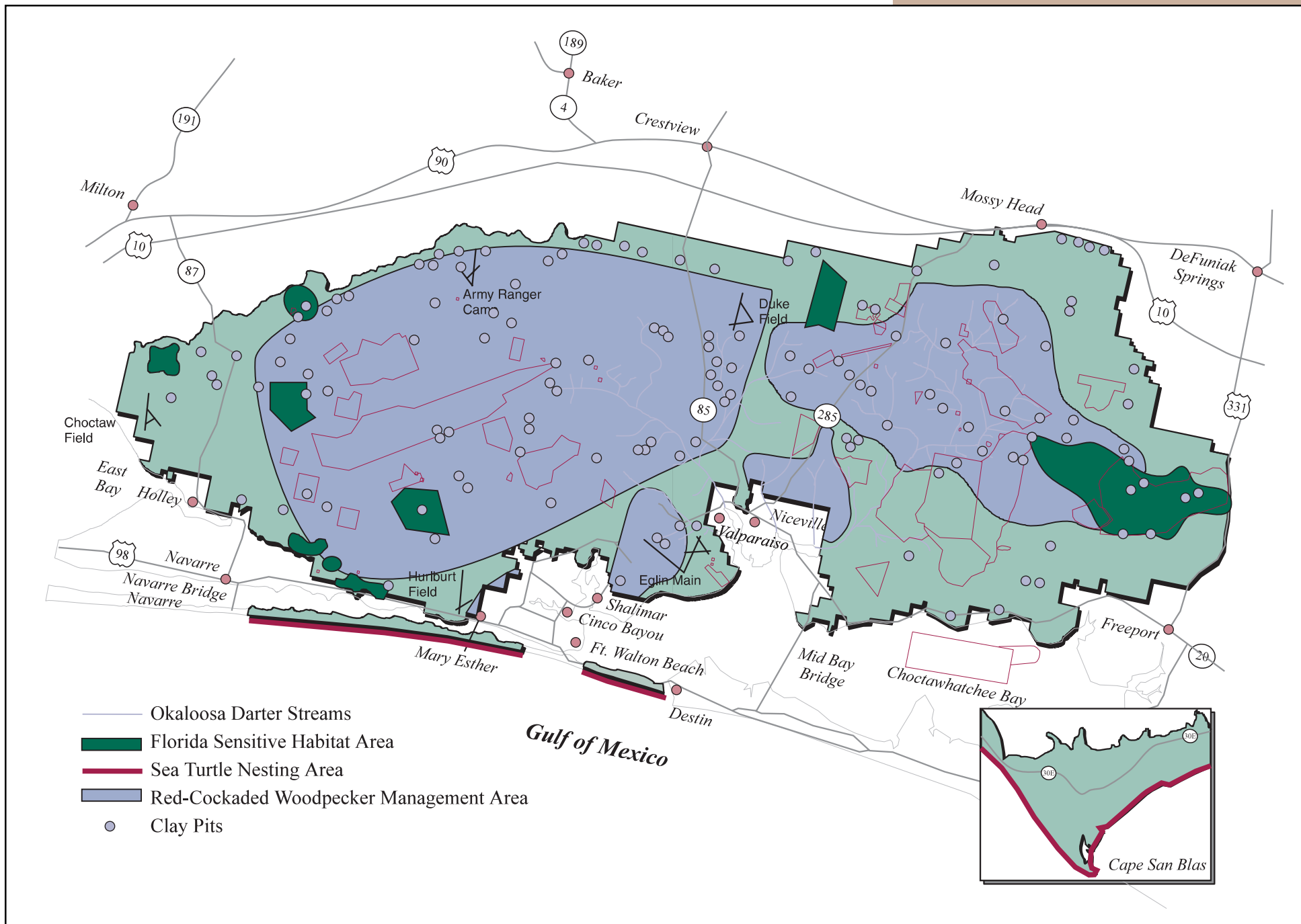
*Cultural resource management is one of the many ways Eglin protects the resources entrusted to it. Here, a site feature is investigated.*

- **E-6: Threatened and Endangered (T&E) Species.** Finding the appropriate approaches that permit the balance of mission and T&E species protection is a continuing need.



*Okaloosa darter (actual size).*

- **E-7: Choctawhatchee Bay.** The Bay ecosystem is changing, resulting in loss of sea grass beds, extensive shore erosion, degraded water quality and declining fisheries.
- **E-8: Targets.** Targets can present an environmental hazard when destroyed on the Range.



Environmental Planning Areas



# Range Planning Areas

## Airspace

- A-1 Commercial/General Aviation
- A-2 North/South Corridor Use
- A-3 Tall Structures
- A-4 Low-Level Entry
- A-5 Compatibility of Land Use
- A-6 External Encroachment

## Land Use

- L-1 Compatibility of Land Usage Adjacent to the Eglin Complex
- L-2 Recreational Access to the Range
- L-3 Range Noise
- L-4 Safety
- L-5 Public Use of Range Lands
- L-6 Irregular Range Boundary
- L-7 Range Capacity and Flexibility for Additional Use
- L-8 Future Use of the Barrier Island
- L-9 Coordination of Land Use

## Transportation

- T-1 Urban Area Transportation
- T-2 Access Points
- T-3 Range Roads-Conditions and Capacity
- T-4 Hurricane Evacuation
- T-5 Commercial Air Traffic
- T-6 Road Closures for Testing



**Airspace/Land Use.** MH-53 Pave Low mission requires low level access to the Eglin Range.



**Land Use.** Sensor-fuzed weapons being dispensed above vehicle target array show the need for maintaining Impact Limit Line.



**Infrastructure/Transportation.** Typical test area with access roads, targets and instrumentation.

## Infrastructure

- I-1 Target Debris
- I-2 Range Instrumentation
- I-3 Information Management
- I-4 Groundwater
- I-5 Spray Fields

## Gulf of Mexico

- G-1 Gulf Range Target Support
- G-2 Land/Water Transition
- G-3 Gulf Environment
- G-4 Offshore Mineral Exploration
- G-5 Surface Ships
- G-6 Gulf Instrumentation

## Environmental

- E-1 Natural/Cultural Resources
- E-2 Erosion
- E-3 Fire Management/Protection
- E-4 Unexploded Ordnance and Safety
- E-5 Water Resources
- E-6 Threatened and Endangered Species
- E-7 Choctawhatchee Bay Ecosystem
- E-8 Targets



**Gulf of Mexico.** Offshore oil exploration drillship.



**Environmental.** Burrowing owls are found on Test Area B-70.

*“While there are important planning areas to be addressed—none are show stoppers. Recognition of these areas and focused engagement will preserve the Range’s future.”*

—Col. Strittmatter, 46TW Commander

# The Vision

Changing times demand new vision. The Air Force has long embraced change, and never more so than in recent years. The years since the Cold War have seen the Air Force reinvent itself. New methods and strategies are replacing diminishing resources. A complete restructuring has consolidated major commands and given people at all levels the necessary authority to control the resources required to accomplish new missions. Personnel has been reduced by one-third, fighter and ICBM forces by about one-half, and the bomber force by two-thirds (Source: 1995 Air Force Issues Book).

## Today and Tomorrow

While resources have diminished, demands for air and space power have increased. The Eglin Range is responding with aircraft armament testing that has allowed “smart” weapons to augment conventional weapons, with even more advanced weapons soon to follow. From the Air Force’s vision, to the mission of the Air Force Materiel Command (AFMC), through the Air Force Development Test Center’s (AFDTC) core purpose, the guiding principles for aircraft armament are clear. **These are the principles that come alive in the Vision . . .**



*The Weapon Flight Mechanics Division (WL/MNA) at Eglin researches, develops, and transitions weapon air frame, guidance, carriage/release, and weapon integration technologies for the future.*

## AIR FORCE

### Vision

*Air Force people building the world's most respected air and space force . . . Global power and reach for America.*

## . . . For Enhanced Weapons

To fulfill this vision, three objectives guide the Air Force—maintain combat readiness, shape tomorrow’s Air Force, and support our people. In terms of aircraft armaments, the Air Force supplies the vision for the **establishment of the correct programs**. This vision is in turn supported throughout the chain of command—from the Air Force to AFMC through AFDTC, culminating in the Range itself. It is clear that armament superiority is a vital element in the Air Force vision.

The value the Air Force places on armaments can be seen in its projections for its 20 most costly systems expenditures over the next 10 years. During that period, the Air Force expects to spend \$16.7 billion on armaments—a figure surpassed only by the \$38.5 billion expected for aircraft (Source: *Air Force Times*, Aug. 28, 1995).

Has the Air Force established the right programs? The answer can be seen in expectations for the U.S. to reap “up to 89 percent of projected worldwide sales of more than 15,000 missiles and weapons with a total value of up to \$22.1 billion” as a by-product of its victory in the Persian Gulf War (*Air Force Magazine*, Sept., 1995).



## AFMC

### Mission

*Build and deliver military systems and sustain those systems throughout their service lives.*

### ... For Enhanced Weapons

As the U.S. military realigns and becomes smaller, AFMC's mission continues to evolve to satisfy customer needs and sustain technological superiority (*Wright-Patterson AFB Development Summary*).

**AFMC accomplishes its aircraft armaments mission through the life cycle execution of superior programs based at Eglin AFB.**

- Research and Development by *Armament Division - Wright Laboratory of Aeronautical Systems Center (ASC)*.
- Systems Acquisition by *Systems Program Offices* of ASC.
- Test and Evaluation by *46 Test Wing* of AF Development Test Center.
- Armament Planning by *Armament Product Management Group* of ASC.

## AFDTC

### Core Purpose

*Provide a national capability for test and evaluation of defense weapon systems and satisfy diverse customer requirements with world-class facilities, expertise, and support resources.*

### ... For Enhanced Weapons

The goals for AFDTC reflect its core purpose:

- Support warfighter needs in the primary mission to provide full-service air armament test and evaluation for all the Air Force and DOD.
- Continue to be an outstanding host to associate units so they can accomplish their missions.
- Maintain a high quality of life and satisfaction within the Eglin community (*AFDTC Strategic Plan 1994-1999*).

AFDTC provides superior support for **testing and evaluation of munitions** through its ranges, facilities, and people. Eglin is a hub for air armament munitions research, development, testing, and evaluation because of its ability to provide these services throughout the total RDT&E lifecycle. Two principles guide the planning processes and actions of this DOD Center of Excellence: Integrity and Total Quality. Through dedication to these principles, AFDTC links Air Force goals with mission results.

*“In the current business environment of declining resources and increasing competition, it is paramount that we focus on improving the performance of the command.”*

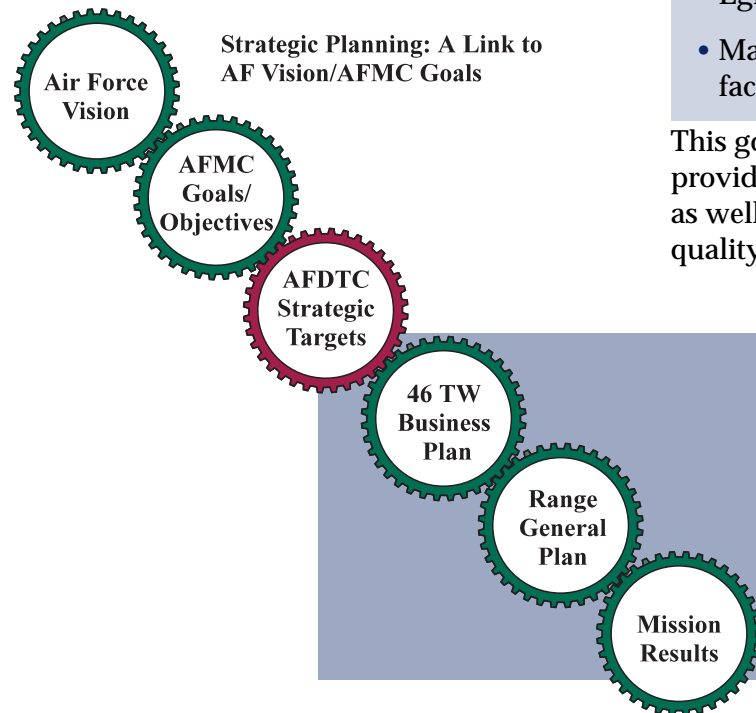
—Commander  
Air Force Materiel Command

# AFDTC Range Goals

The goals for the Range flow directly from the AFDTC core purpose. The concept of shared vision—Air Force objectives, AFMC goals, AFDTC mission, planning areas—yields the equation for determining the Range goals.

Achieving this vision requires the establishment of specific goals. Through these goals, the framework for Range planning can be constructed based on the planning areas identified by the Range users and the communities.

## ... The Linkage



## ... The Goals

### Goal 1

Maximize the capability of the unique air, land, and sea assets while continuing to be a good steward of the regional environment. Application of these Range assets support the following:

- **Support warfighter needs** in the AFDTC primary mission to provide full-service air armament test and evaluation for the Air Force and DOD.
- Continue to be an outstanding host to all Eglin-based **associate units**.
- Maintain a high **quality of life** and satisfaction within the Eglin community.

This goal recognizes the role of the Range in providing balanced support to the warfighter as well as Eglin's associate units and overall quality of life.

### Goal 2

Develop a **Range-wide planning perspective** of Eglin's units through proactive identification and joint resolution of Range development planning areas that address:

- **Interdependence** of actions concerning Range development and infrastructure.
- **Stewardship** requirements of the unique ecosystems entrusted to Eglin.
- **Synergism** of individual capabilities combinations, which enhance Eglin's position as a national asset.

This goal establishes a Range planning focus on the total Range instead of suboptimizing planning of components.

## AFDTC Future Strategies

- Help Shape the Future of Air Armament
- Increase Productivity
- Enhance Our Reputation for Excellence
- Foster Teamwork

### Goal 3

Enhance the **partnership** between Eglin AFB and the surrounding communities by fostering integrated planning processes and coordinated development plans that fully consider both of the following conditions:

- Impact of the **Eglin AFB mission** on the surrounding communities.
- Impact of **regional growth** patterns on Range development.

This goal links the Range operational needs to the community and the inverse as an integral component of both flourishing.



*Eglin AFB is committed to protecting the quality of life in this uniquely beautiful area.*

*“The key to our future  
is maintaining a  
balance between  
readiness, quality of life  
and modernization.”*

—Dr. Sheila E. Widnall  
Secretary of the Air Force



# Range Vista 2025

Numerous studies, plans and speeches point to the future and provide insights for the Range planner in formulating the Range Vista 2025 as follows:

- DOD Key Technologies Plan
- Defense Science and Technology Strategy
- Defense Technology Plan
- Air Force T&E Mission Area Plan (MAP)
- Test Resource Master Plan
- AFDTC Test Investment Process
- Speech by Gen. Fogleman (AF Chief of Staff) - "Getting the Air Force into the 21st Century"
- Air Superiority and Air-to-Surface Development Plans and Maps
- Conventional Munitions Technology Area Plan
- Corona Briefing - Revolutionary Planning
- New World Vista by AF Science Advisory Board

From these sources and by working closely with Range customers, AFDTC has observed trends which have been categorized in the following three areas:

## Customer Needs

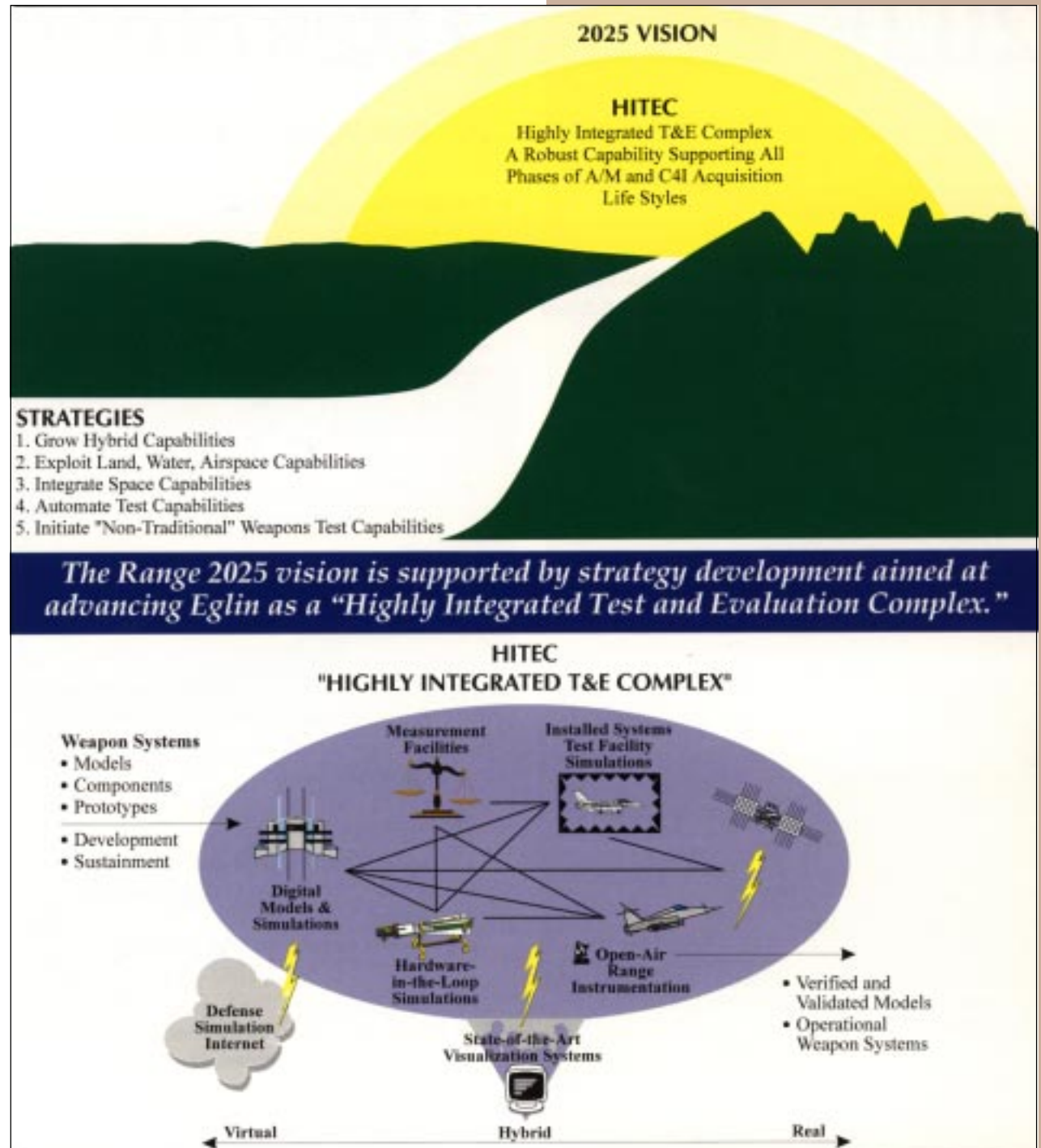
- Long Standoff - 500nm
- Low Observables
- All Weather
- Autonomous Launch and Leave
- Increased Terminal Accuracy
- Retargetable Weapons
- Identification Friend or Foe
- Hard Target Kill
- Multiple Kills/Pass
- World Wide Operations
- Counter Counter Measures
- Near Real-Time Knowledge of Enemy
- Low Conflict Capabilities, e.g., Non-Lethal
- Counter Weapons of Mass Destruction
- Deployable C4I Networks

## Technology Drivers

- Higher Velocity
- More Maneuverability
- Info Processing Speed Increase
- Advanced Sensors
- Unmanned Aerial Vehicles
- Energetic Materials
- Advanced Guidance Techniques
- Integrated Guidance and Fuzing
- Directed Energy Weapons
- Integrated Space Assets
- Multispectral Susceptibility and Jamming
- Miniature Munitions Technology
- Simulation/Modeling
- Miniaturization/Subminiaturization

## Business Perspective

- Pre Planned Product Improvement (P3I)
- Less Operations and Maintenance Funding
- Fewer Government Test and Evaluation Experts
- Sustainment Need Increasing
- Joint Test and Training Efforts
- Reduce Test Cost
- Increase Commercial Work
- Increase Foreign Military Sales Testing
- Frequency Spectrum Constraints
- Environmental Constraints
- Near Real-Time Data and Analysis
- More Contractor Test and Evaluation



# 2025 Range Objectives

The objectives for the Range in 2025 flow from in-depth analysis of the future. The Test Wing wants to be positioned to take advantage of the future.

These objectives represent the best thinking of the Test Wing—thinking that has been validated by the AFDTC Executive Council as the direction to guide all Range development.

These objectives will be reviewed semi-annually by the Test Wing and be revalidated during the semi-annual Test Wing Range Development Executive Steering Committee presentation to the AFDTC Facilities Board.



*Advanced Warhead Evaluation Facility (AWEF) on Test Area C-64C.*

## . . . Test Areas/Sites

- **T-1: Overland Standoff.** Establish the appropriate standoff range necessary to test and evaluate future weapon systems.
- **T-2: Island Restoration.** Restore the Island, which was damaged by Hurricane Opal in October 1995, to its full potential through the following three phases:
  - Restore Infrastructure - 1997
  - Rebuild three sites - 2000
  - New Test Capabilities - TBD
- **T-3: Overland Drones.** Establish routine testing for air-to-air weapons against overland drones.
- **T-4: Test Area Re-evaluation.** Re-evaluate each test area to identify shortfalls and potential to support the following growing test requirements:
  - Hardware in the Loop
  - Unmanned aerial vehicles
  - Command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR)
- **T-5: Water-to-Land Transition.** Modify and enhance test areas, procedures and instrumentation to support water-to-land transition weapon profiles.

## . . . Interstitial Areas

- **I-1: Ecosystem Management.** Maintain the award-winning ecosystem management program which allows greater flexibility in testing as well as being a good steward of Eglin's natural and cultural resources.
- **I-2: Appropriate Infrastructure.** Establish the appropriate infrastructure of roads and utilities systems through the interstitial areas that support the test areas/sites of the future with less operation and maintenance cost and environmental impact.
- **I-3: Environmental Impact Analysis.** Establish a responsive Environmental Impact Analysis Program to ensure environmental requirements are appropriately considered in planning for the accomplishment of Eglin's mission.
- **I-4: Information Management.** Enhance customer access to superior knowledge about the Eglin Range by developing information for input to network, thereby accelerating and improving decision-making by Range users.



## ... Gulf Range

- **G-1: Gulf Range Enhancement.** Enhance Gulf Range capabilities for the following:
  - Low-level time, space, and position indication (TSPI).
  - Overwater impact TSPI - 1 meter resolution.
  - Overwater impact photography.
  - Survival evaluation.
  - Global Positioning System and sensor jamming.
- **G-2: Appropriate Corridors.** Establish appropriate flight corridor(s) to enable safe water-to-land-to-test area profiles for munitions weapon systems and C4ISR vehicles.
- **G-3: Drone Control.** Enhance drone control system by developing non-cooperative terminal scoring.

## ... Airspace

- **A-1: FAA Procedures.** Establish procedures with the FAA to enhance support of testing that involves the full breadth of the land component of the Range: air-to-air, air-to-surface, surface-to-surface.



*An F-15 on final approach to Eglin Main over Bluewater Bay area, near Niceville.*

## Summary

The key to Eglin's future is the Eglin Gulf Test Range (EGTR). It has unsurpassed potential to support testing of future long standoff weapons that function autonomously. Ranges of weapons of hundreds of miles are easily accommodated on the EGTR. Autonomous weapons can be tested with complete safety due to the expanses of the EGTR. Additionally, the high-quality Eglin land ranges' unique capabilities - used to develop the early generations of precision-guided weapons - are available to test the terminal phase of long standoff weapons against hard and mobile targets.

# The Strategy

*“The combination of slower modernization rates and a rapidly changing threat environment makes long-range planning more difficult and more important.”*

—General Shalikashvili  
Chairman, Joint Chiefs of Staff

## ... For Realizing Objectives

The Range exists to support the objectives and missions of AFDTC and the Air Force. It must continue to provide capabilities for testing and training relative to precision strike and information technology to support our armed forces' changing defense strategy as outlined in the Air Force's *Global Presence* (1995):

“We in the military possess the means, physical and virtual, to provide America continuous awareness of world events and a force capable of projecting military power world wide, in minutes or hours, with little or no warning. In so doing, we accomplish our responsibility to our civilian leadership and the American people to deter potential adversaries or fight and win wars decisively.”

Range-wide planning will position Eglin as a leader in the USAF's new strategic approach to its core mission. At the same time, regional planning will benefit the surrounding communities by supporting both economic development and community needs. Coordination of the various entities toward a strategic regional policy plan will yield both a robust and diversified economy and a strong military mission.

## ... For Addressing Planning Areas

The planning areas that affect the Range provide the foundation for developing the Range's future direction. Combining these *planning areas* with the *objectives* for the Range creates a clear picture from which the *actions* will proceed.

Because of the vastness of Eglin and the interdependence that exists between the Range and the surrounding communities, Range planning strategies should be similar to those of a small state with both developed and undeveloped areas as well as competing development demands. External planning areas should be weighed in terms of their local and regional context, while internal planning areas must relate to both AFDTC objectives and the needs of the communities.

# Range Objectives and Planning Areas Matrix

	Range Objectives	T-1	T-2	T-3	T-4	T-5	I-1	I-2	I-3	I-4	G-1	G-2	G-3	A-1
		Overland Standoff	Island Restoration	Overland Drones	Test Area Re-eval.	Water-to-Land Transition	Ecosystem Management	Appropriate Infrastructure	Env. Impact Analysis	Information Management	Gulf Range Enhancement	Appropriate Corridors	Drone Control	FAA Procedures
Range Planning Areas	A-1 Increase in Aviation	•	•	•	•	•			•	•	•	•	•	•
	A-2 North South Corridor	•		•	•	•			•	•	•	•		•
	A-3 Tall Structures		•		•	•			•	•	•	•		
	A-4 Low Level Entry		•						•		•	•		
	A-5 Compatible Land Use					•			•			•		
	A-6 Encroachment	•	•	•	•	•	•		•	•		•		
	L-1 Adjacent Land Use					•	•		•		•	•		
	L-2 Range Access		•		•		•		•	•	•	•		
	L-3 Range Noise			•	•				•			•		•
	L-4 Safety	•		•	•				•	•		•	•	•
	L-5 Range Public Use	•	•		•		•	•	•			•		
	L-6 Range Boundary				•	•			•		•			
	L-7 Range Future Use	•	•		•	•	•	•	•		•	•		
	L-8 Barrier Island Use		•		•	•	•	•	•		•			
	L-9 Use Coordination	•	•	•	•	•	•	•	•		•	•		
	T-1 Area Transportation	•		•	•			•	•					
	T-2 Access Points	•	•	•	•	•	•	•	•					
	T-3 Range Roads	•	•	•	•	•	•	•	•					
	T-4 Hurricane Evacuation				•			•	•					
	T-5 Commercial Air Traffic	•		•				•	•		•	•		•
	T-6 Road Closure	•		•	•	•		•	•			•		•
	I-1 Target Debris				•		•	•	•	•	•	•		
	I-2 Range Instrumentation	•	•	•	•	•		•	•	•	•	•		
	I-3 Information Mgmt.	•	•		•	•	•	•	•	•	•	•		
	I-4 Depleted Groundwater			•		•			•					
	I-5 Community Effluent				•		•	•	•					
	G-1 Gulf Targets						•		•	•	•		•	
	G-2 Land/Water Interface					•		•	•	•	•	•		
	G-3 Gulf Protection					•	•		•	•	•	•	•	
	G-4 Offshore Exploration								•	•	•	•	•	
	G-5 Surface Shipping								•	•	•	•	•	
	G-6 Gulf Instrumentation		•					•	•	•	•	•	•	
	E-1 Resource Protection				•		•	•	•	•				
	E-2 Erosion Road/Pits	•			•	•	•	•	•	•				
	E-3 Fire Management	•				•	•	•	•	•				
	E-4 Unexploded Ordnance				•	•	•	•	•	•				
	E-5 Diminishing Water		•				•	•	•	•				
	E-6 Threatened Species	•	•		•		•	•	•	•				
	E-7 Bay Ecosystem						•	•	•		•			
	E-8 Targets	•			•	•	•	•	•	•	•	•	•	•



# Comprehensive Plan Program

## ... Why ?

The Comprehensive Plan is an Air Force-established program to create a framework for decision making with regards to development of Air Force installations. Comprehensive planning provides the commander with information necessary to logically and thoroughly analyze a variety of factors before making an installation development decision. The planning process includes all land, sea and airspace areas under Air Force control and the installation's region of influence, including communities and area infrastructures.

Air Force Comprehensive Planning is based on four levels of planning documents:

- The General Plan
- Component Plans
- Planning Elements
- Maps

## ... What ?

### General Plan

Provides the installation commander and other decision makers a consolidated picture of the installation's capabilities to support the mission. Serves as an outstanding summary of the installation for key staff, associate units, community and political leaders, and installation visitors. A required Air Force document for every Air Force installation with the form determined by the commander to meet the installation's needs.

### Component Plans (see table on facing page)

Detailed documents that consolidate and correlate related functional planning elements. The component plans are comprised of detailed graphics, textual data and written narratives to tell the installation's story. Component Plans are not a required document of Air Force comprehensive plans but the planning to produce them is an essential step to bridge the gap between functional planning of planning elements and the summary document, the General Plan.

### Planning Elements (see page 46)

Functional planning documents necessary for functional areas to manage and plan for the future. These planning elements are required by Air Force Policy but may be supplemented by any additional plan an installation needs to plan for the future.

### Maps (see page 48)

Graphic representations of the installation and the surrounding region of influence with overlays of significant functional characteristics and planned installation development. Maps are commonly being replaced by geographic information systems (GIS) that permit the linking of maps with data bases to produce a powerful tool for installation management with the added benefit of sharing this information across the installation.

Component Plans	Planning Elements
<ul style="list-style-type: none"> <li>• Composite Constraints &amp; Opportunities</li> </ul>	<ul style="list-style-type: none"> <li>• Natural Resources Plan</li> <li>• Cultural Resources Plan</li> <li>• Environmental Quality Plan</li> <li>• Noise Plan</li> <li>• Safety Plan</li> </ul>
<ul style="list-style-type: none"> <li>• Infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Utilities Plan</li> <li>• Communications Plan</li> <li>• Fire Protection Plan</li> <li>• Transportation Plan</li> <li>• Range Instrumentation Plan</li> </ul>
<ul style="list-style-type: none"> <li>• Land Use</li> </ul>	<ul style="list-style-type: none"> <li>• Installation Mapping</li> <li>• Vicinity Mapping</li> <li>• Range Compatible Use Zones</li> <li>• Area Development Plans</li> </ul>
<ul style="list-style-type: none"> <li>• Capital Improvement</li> </ul>	<ul style="list-style-type: none"> <li>• Barrier Island Restoration Plan</li> <li>• Erosion Control Plan</li> <li>• Facility Improvement Plan</li> <li>• Range Improvement and Modernization Plan</li> </ul>

*"Plans are nothing.  
Planning is everything."*

— General Dwight D. Eisenhower  
Supreme Allied Commander  
World War II

# Planning Elements Status

Much planning has been accomplished over the years by numerous organizations that use and support the Range. In the past, these efforts were coordinated with other users but were not thought of as planning elements supporting a Range General Plan. With the adoption of the Air Force planning process for the Range, these independent planning efforts are for the first time beginning to have a synergistic impact on each other. As a result, **a new perspective of the Range is unfolding.**

Here is the status of the independent planning element efforts as they are before the adoption of a comprehensive planning program by the Test Wing. As these elements are reviewed and folded into a true Range comprehensive plan they will take on additional importance to each other and their direction will be adjusted to focus on supporting the Range Objectives and Planning Areas.



*Typical Range Okaloosa darter stream.*

## Composite Constraints and Opportunities

### Natural Resources Management Plan

A DOD award-winning plan based on ecosystem management is in place to effectively guide wise stewardship of the Eglin Range. Ongoing scientific studies are underway to broaden the knowledge of the Range ecosystems.

### Cultural Resources Management Plan

An extensive cultural resource study has been completed with additional studies underway.

### Environmental Quality Plan

A Range-wide Environmental Baseline Study has been accomplished with a five-year program to extend the study to the test area level.

### Noise Plan

A Range noise study is underway to characterize the on- and off-base noise impact.

### Range Safety Plan

An extensive safety program is in place that ensures all testing is done safely. It deals with methodology to plan and execute test and training programs safely within the confines of limited resources.

## Infrastructure

### Utilities Plan

The 96 Civil Engineering Group is responsible for developing a utilities master plan for the Range. No formal plan exists but there are projects to improve the water and electrical systems on the Range.

### Communications Plan

There is an extensive plan completed by the 96 Communications Group that supports the Range operation through the installation of fiber optics to all required test areas and sites.

### Fire Protection Plan

The Natural Resources Management Division of the AFDTC Environmental Management Directorate is responsible for Range fire protection through controlled burns and fire fighting operations. Extensive study and planning has occurred.

### Transportation Plan

No formal plan exists. Studies have occurred to develop a Range road system while reducing erosion.



## Land Use

### Installation Mapping

Contract efforts are being completed to digitally map the land Range and enter it into a geographic information system (GIS). Extensive effort is required to complete and to add the Bay and Gulf to the GIS.

### Vicinity Mapping

Some vicinity mapping exists in the GIS. Attributes across the Region of Influence need to be added to the GIS.

### Range Compatible Use Zones (RACUZ)

Air Installation Compatible Use Zones exist for Eglin Main and Hurlburt Field operations but not for the Range operations.

### Area Development Plans (ADP)

There are no formal ADPs for the Range Test Areas at this time.



Test Area C-72 looking west.

## Capital Improvement

### Santa Rosa Island Test Capability Reconstitution Plan

There is a three-phase plan to restore and improve the island test areas. Phase I Restoration is underway.

### Erosion Control Plan

A program is being developed to close old clay pits and control Range road erosion. Some very successful work has been completed but funding constraints exist.

### Facility Improvement Plan

An ongoing series of five-year programs for new facility construction and major improvement.

### Range Improvement and Modernization Plan

A mature and active methodology that plans and programs for Range instrumentation and facility enhancements, upgrades, and construction to keep pace with state-of-the-art technology and customer requirements. This is an annually funded program with extensive detail on Range capabilities enhancement.

## Actions

- Complete Planimetric Mapping of Installation and Vicinity as foundation for all future planning.
- Develop Phases II and III of Island Restoration Plan.
- Accomplish a Range Transportation Plan.
- Accomplish a RACUZ Plan.
- Accomplish an Erosion Control Program.
- Accomplish Test Area Environmental Baseline Study with GIS mapping.
- Accomplish Mission-Level Programmatic Environmental Impact Studies for:
  - Ordnance
  - Smokes and Obscurants
  - Chaff and Flares
  - Air Operations
  - Ground Operations
- Start Area Development Plans for the highest priority test areas for future development.

# Range “Intelligent” Maps

Maps are the last of the four basic parts of the Air Force Comprehensive Plan structure. Maps are the integrating tool of comprehensive planning that portray geographic location—the heart of planning. In the past, mapping was a laborious and time-consuming process which resulted in numerous independent maps to support specific purposes.

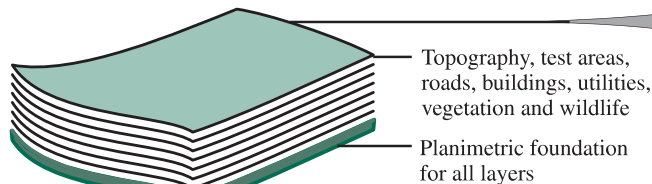
The advent of desktop computing with Geographic Information System (GIS) software permits a paradigm shift to Intelligent Maps. Now maps can be stored digitally with multiple layers of information. Each layer can have data in databases associated with points or regions on the base map. The layers and data can support modeling tools that permit 3-D pictures of topography and other attributes. Lastly, Decision Support software permits asking “what if” questions that identify regions that meet desired criteria.

Eglin has made an extensive investment over the years in bringing GIS to full maturity in support of the Range. Digital mapping of the ranges is being completed, as well as digitizing the test area maps. Resource layers with databases are being added daily. Wide-area networks across the Range and local-area networks in facilities are being installed to support GIS information sharing. Years of development work are ready to pay off with a rapid multiplication of capability to bring Range planning

into a new dimension—“**intelligent**” maps **available to all, from the technician to senior management.**

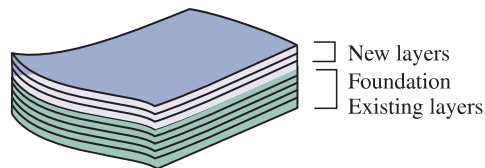
## ... Mapping

### Range-Wide Shared Maps

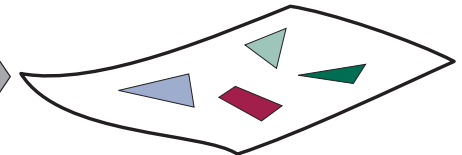


Analysis

### Custom Map

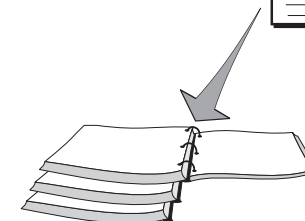


## ... Data Bases



Attribute Table

Test Area	_____
Soils	_____
Infrastructure	_____
	_____
	_____
	_____
	_____
	_____
	_____
	_____



### Reports

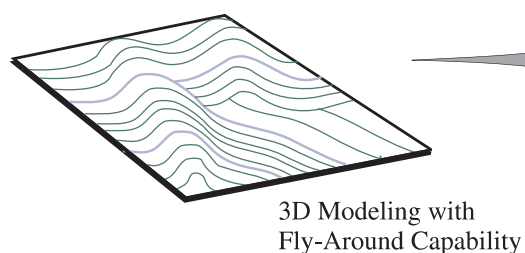


### Trend Analysis



46TW GIS product shows topography, roadways, and other data.

## ... Modeling



### Examples

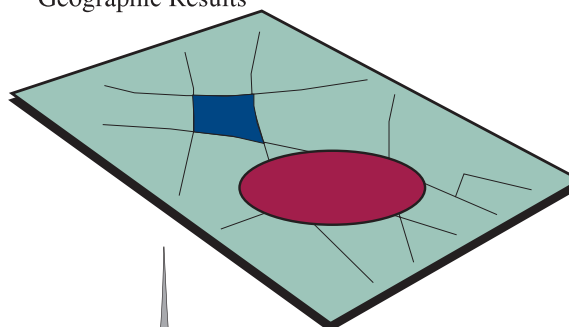
Air Emissions Model  
+ Prescribed Burns  
+ Smoke & Obscurants

Ground Contamination Model

Virtual Reality Capability to Enhance Special Operations Missions

## ... Decision Support

"What if" Analysis with Geographic Results



Zone Meeting All Required Criteria,  
e.g.,  
Mission Impact Analysis  
Environmental Impact Analysis

# Geographic Information System (GIS)

## ACTIONS

- Complete planimetrics of Land and Gulf Ranges and regions as foundation for the overlays.
- Accomplish initial loading of map overlays for resources with associated databases.
- Expand availability of GIS and products to the Test Wing and Range users.
- Study the integration of the GIS with existing and proposed Test Center and customers' automation systems that require geographic information to maximize synergy.



GIS can have a positive impact on Range planning by allowing ready access to multiple layers of information.



# Structure

## ... Organization

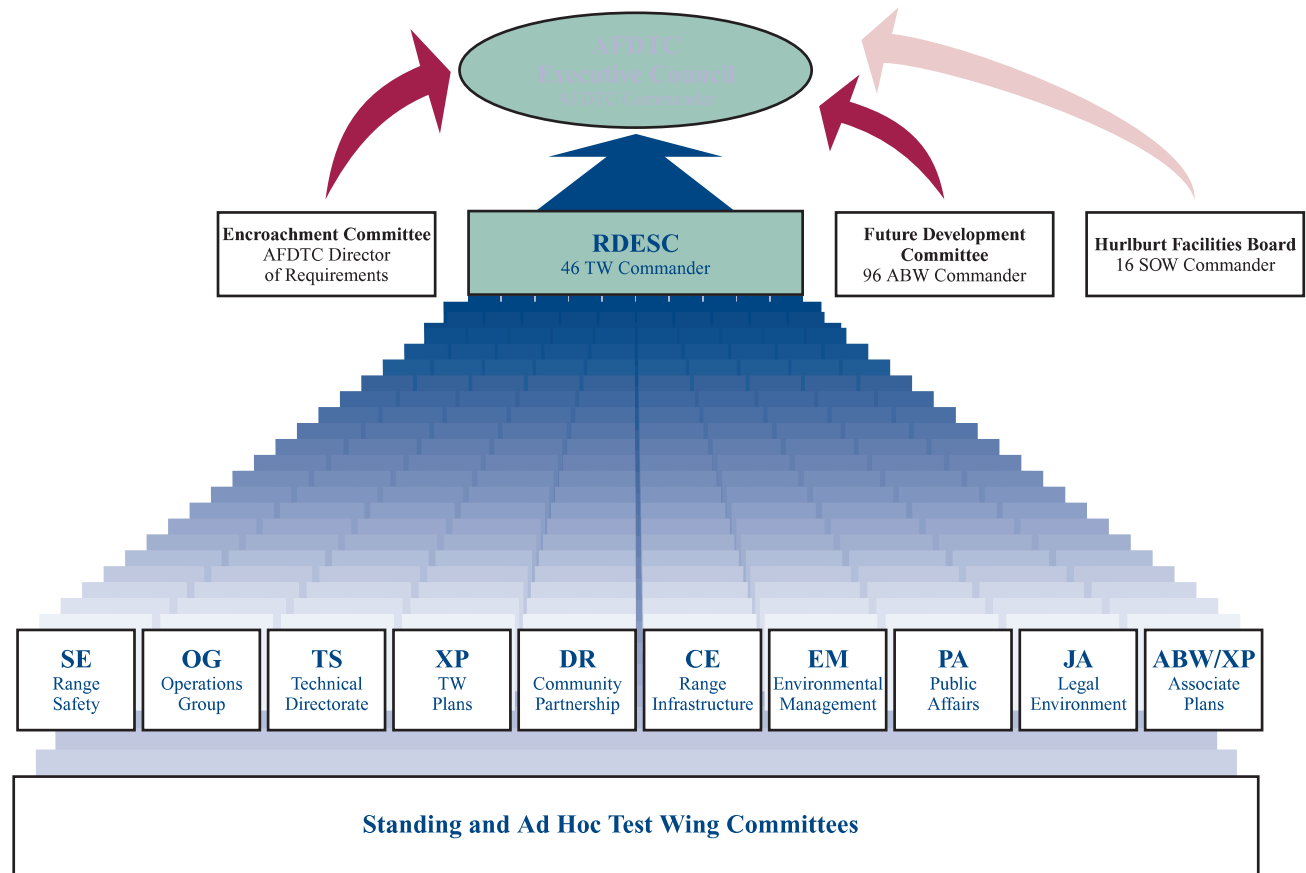
**AFDTC Executive Council** is the senior planning body of Eglin chaired by the AFDTC Commander. Semi-annually reviews all development plans—Range and Eglin Main—and provides corporate direction as key decisions are required to adjust approved plans.

**Range Development Executive Steering Committee (RDESC)** is the senior planning body for the Test Wing that approves and gives strategic direction to Range planning. Composed of the Test Wing Commander with senior technical leaders and representatives from Eglin organizations that provide Range support.

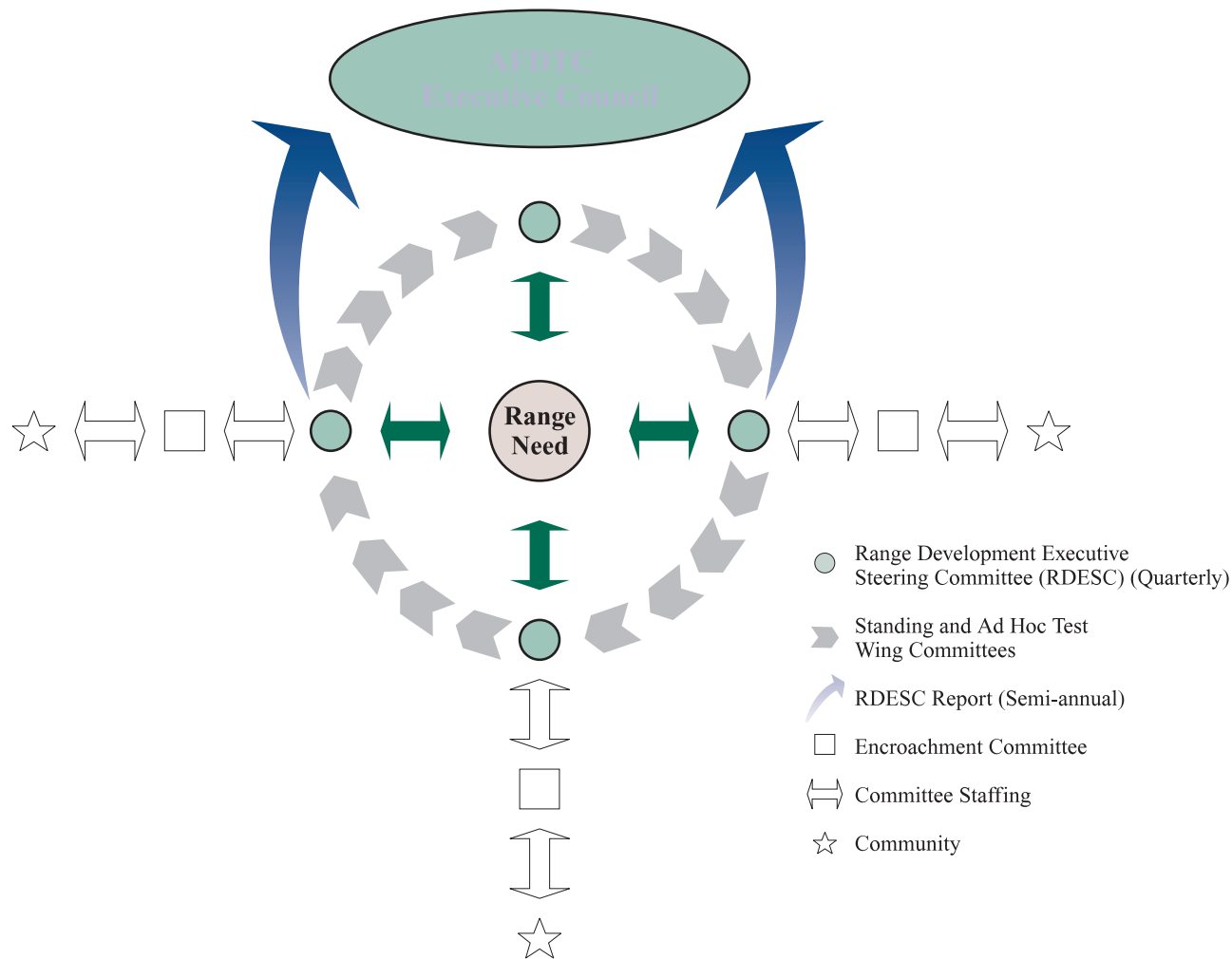
**Test Wing Plans Office (46TW/XP)** is the Test Wing organization with the responsibility to manage the Test Wing Range Comprehensive Planning Program.

**Range Environmental Planning Office (46TW/XPE)** is the unit of the Test Wing Plans Office that has the day-to-day responsibility of executing Range Comprehensive and Environmental Impact Analysis Planning.

**Standing and Ad Hoc Test Wing Committees**  
Existing committees will be directed by the RDESC. Ad hoc groups will be formed to deal with short term study efforts as required.



## ... Process



Range Development Annual Planning Cycle

## Actions

- Publish a Test Wing Instruction on Range Planning to establish the roles of organizations and the TW planning process
- Revise charter for the RDESC and the Test Wing Standing and Ad Hoc Committees
- Work with other organizations to unify Eglin comprehensive planning and make Range planning a full partner in the AFDTC comprehensive planning process

# Implementation

## ... Top Actions

**1 Institutionalize Range Comprehensive Planning** across the Test Wing and with all Range users based on the AF Comprehensive Planning Model.

- **Establish an expanded Range planning structure** based on the Test Wing Commander's Range Development Executive Steering Committee and the semi-annual AFDTC Executive Council planning cycle.
- **Accomplish key specific planning efforts identified in this Plan** to supplement the ongoing planning efforts and support future Range Goals.
- **Integrate the Range Geographic Information System** with the Test Wing and with its users.

**2 Direct Range development based upon the results of the AFDTC Commander's "Look to the Future" Study priorities.**

**Priority 1.** Enhance Gulf to Land Flight Corridor

**Priority 2.** Manage Growth in Center of Range

- A) Duke Field
- B) Site C-6
- C) Test Site B-4

**Priority 3.** Develop Future Budget Input Based on This Plan's Priority of New Initiatives

1. Miniaturized Flight Termination System
2. Water Impact Scoring System
3. C4I Battle Lab
4. Networks and Links
5. Open Air Range - Hardware In The Loop (OAR-HITL) Testing

**Priority 4.** Recruit C4I Intellectual Capital (People) NOW

**Priority 5.** Retain Existing Intellectual Capital (People)

**3 Measure all planning decisions in terms of how they support the three Range Goals and 13 specific objectives.**

- **Maximize the capabilities of the Range** to support the Warfighter, Associate Units and Quality of Life.
- **Maintain a proactive planning perspective** based on joint identification and management of development needs that stress interdependency, stewardship, and synergism.
- **Enhance the military-civilian regional partnership** through continuing the superior relationship in the region.



## *This is the Eglin Range General Plan:*

- *Providing the focus*
- *Defining the process*
- *Supporting the mission*
- *Ensuring the future*



## Acknowledgements

This plan was developed by the Plans office of the 46 Test Wing (46TW/XP) in partnership with the Environmental Management Directorate of AFDTC (AFDTC/EM). Invaluable support of the following organizations is also acknowledged:

### Air Force

- AFDTC Staff
- Air Force Center for Environmental Excellence
- Air Force Materiel Command
- 16 Special Operations Wing
- 33D Fighter Wing
- 46 Test Wing
- 53D Wing
- 96 Air Base Wing

### Associate Units on the Range

- NAS Whiting Field
- US Coast Guard Station Destin
- US Navy EOD School
- 6 Ranger Training Battalion
- 20 Space Surveillance Squadron
- 919 Special Operations Wing (AFRES)

### Contractor Support

- Woolpert (Prime)
- DYNCORP
- Science Applications International Corporation
- Vitro Technical Services







